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ART. I.—*A Clinical Lecture on the Nature, Causes, and Treatment of Strabismus; delivered at the Louisville Marine Hospital, February,* 1842. By S. D. GROSS, M. D., Professor of Surgery in the Louisville Medical Institute.

Having recently performed the operation for strabismus several times in your presence, and many of you having expressed a desire to be made more fully acquainted with it, it is my design this afternoon to take up the subject in detail, and to lay before you such facts as an attentive study of this affection, during the last eighteen months, has enabled me to acquire.

Nothing, Gentlemen, so clearly evinces the happy progress of surgery as the remarkable improvements that have been effected, within the last six years, in the treatment of club-

foot and other analogous distortions. Until recently the nature and causes of these affections were, in great measure, if not wholly, misunderstood, and hence, as might have been expected, they were generally grossly mismanaged, the practitioner having no sound principles to guide or direct him. To Dr. Stromeyer, of Hanover, is justly due the merit of devising a mode of treatment at once easy and efficient, and which deserves allusion on this occasion, as it speedily led to the discovery of the operation which has lately been performed, with so much success, in various parts of the civilized world, for the relief of strabismus. When we reflect upon these curative procedures, their perfect simplicity, their entire freedom from danger, and their happy effects, it is only surprising that they should not have been revealed at an earlier period. Club-foot, wry-neck and strabismus must have been coeval almost with the human race, for it can hardly be supposed that mankind were ever wholly exempt from these and other infirmities incident to our nature. However this may be, their occurrence is exceedingly frequent at the present day, and the interest attached to them by the medical profession and society at large is fully commensurate with their importance. By the abnormal condition of a few muscles, often of very small size, or, indeed, of a single muscle, the most disagreeable distortion is produced; which, thanks to the researches of Stromeyer and others, may now be rectified in a very short time, or, as in the case of the eye, almost instantaneously.

The operation for the cure of strabismus was first performed on the human subject by Professor Dieffenbach of Berlin, in October, 1839. Prior to that period, however, its practicability had been tested by Mr. Anthony White of London, in several experiments on the inferior animals; and Dr. Stromeyer had also declared his conviction, as to its feasibility, from the fortunate results attending his cases of club-foot. The accounts of this novel operation were everywhere received with enthusiasm by the profession, and soon led to so many repetitions of it, that it may now be ranked as among the es

tablished resources of surgery. By whom it was first executed on this side of the Atlantic, I do not recollect, nor is it necessary that I should; in the West it was first performed, I believe, by Dr. Goulding of Arkansas, and a few weeks subsequently by myself. Altogether, I have now operated between thirty and forty times.

Before I proceed to speak of the nature and causes of strabismus, and the operation calculated to relieve it, I deem it my duty to call your attention briefly to the consideration of the muscles and fasciæ of the eye, as a thorough knowledge of these structures is a matter of no little moment in reference to the subject before us.

Those of you who are familiar with the anatomy of the eye, are aware that it is under the control of six distinct muscles, by which its various movements are performed and regulated. Of these, four are straight, and two oblique, their names being derived from their position in the orbit. The former take their origin immediately around the margin of the optic foramen of the sphenoid bone, whence they proceed forward to the anterior portion of the scelrotic coat, one of them being situated at the upper part of the ball of the eye, another at the lower part, a third internally, and the fourth externally. In this course they lie in close contact with the surface of the organ, being connected to it by cellular substance; and, as they approach the anterior portion of it, they all terminate in small, flat, delicate tendons, which are inserted into the membrane just mentioned, at unequal distances from each other, as well as from the cornea. That this is true, my own researches, confirmed by those of my friend Dr. Buchanan, of Tennessee, and of Mr. Baker, an intelligent and enterprising member of the class, abundantly testify. This statement is at variance, I am aware, with that of the most distinguished anatomists both of this country and of Europe, a circumstance which only proves how imperfectly they have observed and studied this portion of the human system. Professor Horner, for instance, the most able writer on descriptive anatomy in the United States, fixes the distance

at which the straight muscles are attached from the cornea at two lines for the superior and inferior, and at two or three for the internal and external; Mr. Quain, of London, indiscriminately at two lines and a half; Boyer, at two lines; while the more recent French authors, as Cloquet, Cruveilhier and Blandin, have evidently no settled notions in regard to the matter.

From the researches above alluded to, it was ascertained, beyond all doubt, that the internal straight muscle is not only more voluminous than the others, but that it is inserted somewhat nearer the cornea, the central portion of the tendon being rarely more than two lines distant from it, the superior margin more than two and a half, and the inferior more than three. This must give the muscle necessarily a great mechanical advantage, and is one reason probably, if not a principal one, why convergent strabismus is so much more frequent than the other varieties of the obliquity. The distance of the external straight muscle from the cornea may be stated at two lines and a half for the centre, three lines for the superior margin, and three and a half for the inferior; of the superior rectus, at three lines for the centre, three for the inner border, and four for the outer; and of the inferior, three for the centre, three and a half for the inner margin, and four and a half for the outer. To these admeasurements there are of course exceptions, and they are to be received, therefore, only in a general manner; for I have ascertained, to my perfect satisfaction, that the relative distances at which the straight muscles are inserted from the cornea, are liable to vary, not only in different individuals, but even in the eyes of the same person.

It has been already stated that the straight muscles are inserted at unequal distances from each other. This is true, so far as my own observations enable me to judge, in all cases, though there may be occasional exceptions. To exhibit this point in its true light, I will read you the following table drawn up from actual admeasurement:

Distance between the superior and internal muscles - 3 lines.
" " " " and external " - - 4 "
" " " external and inferior " - - 3½ "
" " " inferior and internal " - - 3 "

Such details may appear to you trivial and insignificant, and so, indeed, they are when considered merely in the abstract; but when viewed in reference to morbid action, or the effects of our surgical proceedings, they acquire a degree of interest and importance which those alone, who are familiar with the subject, can fully appreciate.

Are the straight muscles all of the same length, breadth and thickness, in other words, do they all possess the same degree of strength and development? It need hardly be said that they do not, though formerly the reverse of this was supposed to be true. The outer fasciculus is undoubtedly the longest; the inner the shortest and stoutest; the upper and lower being the smallest and nearly of equal length. Occasionally the disparity in the volume of these muscles is much greater than would, at first sight, appear possible. In one instance in which I made accurate admeasurements, I found the width of the internal bundle, one-third of an inch from its point of insertion, four lines, of the external three lines and a half, of the superior three lines and one-fourth, and of the inferior two lines and three-quarters. Generally speaking however, the difference is not so great, and it sometimes happens that the upper and outer muscles are the smallest.

Of the attachments of the oblique muscles it is not my wish to speak, as they are sufficiently well understood, and I have no new views to offer respecting them. I proceed, therefore, to make some remarks on what are denominated the fasciæ of the eye.

Until lately anatomists seem to have entirely overlooked these structures, since no notice of them is to be found in any of our treatises. Eight years ago, while engaged in teaching practical anatomy in the Medical College of Ohio, I satisfactorily demonstrated what I have since called the *ocular fascia*,

and in my Elements of Pathological Anatomy, published in the autumn of 1839, is to be seen a succinct yet clear account of it, the first, I believe, ever presented to the profession. Six or eight months thereafter it was described by Dr. W. A. McDowell of this city, and it has likewise been fully noticed by Mr. Lucas, in his recent treatise on Strabismus, under the name of the *subconjunctival fascia*. To enable you to form a correct opinion of this matter, I beg leave to read the following extract from the work alluded to: "The connection between the conjunctiva and the sclerotica is established through the medium of a pretty thick layer of cellular tissue, which, from the character it plays in the diseases of the eye, deserves to be dignified with the appellation of the *ocular fascia*. When carefully dissected out, it is found to be semi-transparent, strong and elastic, disappearing gradually upon the posterior part of the ball. It is remarkably well developed in the horse and ox, and I have always succeeded in making it out distinctly in the human subject. Considered in reference to its functions, it is of the same use to the conjunctiva that the cellulo-fibrous tunic, so well described by Cruveilhier, is to the stomach and bowels. It is the exclusive seat, in most instances, of the vascularity which characterizes inflammation of the sclerotic portion of the conjunctiva and of the effusions attending it, whether of serosity, of lymph, of blood, or of pus."

To the preceding account I have nothing to add, excepting that the ocular fascia is a most important structure in regard to the successful issue of the operation for strabismus, that it is much stronger in old than in young subjects, and that it is intimately connected with the straight muscles, passing from one to the other, and thus forming partial sheaths for them.

The other fascia, equally important in a practical point of view, has been named by Mr. Lucas, who has furnished a very good description of it, the *submuscular*, from its situation. It lines the posterior surface of the straight muscles, and, as it extends towards their insertion, is reflected off from them upon the ball of the eye as far as the optic nerve. It thus forms a sort of pouch, or cul-de-sac, which encloses the

adipous substance that exists in such abundance in this part of the orbit. In its structure, the submuscular fascia is somewhat stronger than the other, and consequently offers more resistance to the passage of a probe or other blunt instrument. Composed of cellular tissue, it passes from one muscle to the other, and is closely connected, in front, with the preceding, their substance being identified. The straight muscles are thus completely surrounded by these membranes, and hence, unless they are properly divided in the operation for strabismus, there must necessarily be a certain degree of failure, as the affected muscle will not be able to retract sufficiently to liberate the eye. Intending to revert to this point in a subsequent stage of the lecture, I pass on at once to the consideration of the more immediate object of our study.

Strabismus, or squint, as it is termed in common parlance, may be defined to be an aberration of the optic axes from their natural direction, by which the consent between the eyes is destroyed, and vision more or less impaired. The resultant deformity varies in different cases, from the slightest possible to the most disagreeable obliquity. The affected organ may be turned inwards or outwards, upwards or downwards, according to the muscle upon the derangement of which the squint depends. When the eye is directed inwards it constitutes what is called convergent strabismus; if, on the other hand, it inclines outwards, it is said to be divergent. The upward and downward obliquities have not received any particular names. As might be supposed, these different forms of strabismus do not occur with equal frequency. On the contrary, two of them are so exceedingly rare that I have not yet met with an instance, though I have examined the eyes of a very considerable number of persons affected with this infirmity. These two forms are the upward and downward, the latter of which is so seldom witnessed that it may well be doubted whether it ever occurs, except as the result of external violence.

The most common form of strabismus, by far, is the convergent, in which the eye is directed inwards, or inwards and

upwards. Of five hundred and thirty-six cases collected from various sources by a writer in the Philadelphia Medical Examiner, five hundred and six were of this description; a proportion which fully corresponds with my own but more limited experience. The degree of obliquity may be very slight, or so great that when the person looks directly forward with the sound eye, the cornea of the other shall be almost concealed at the inner canthus. It is worthy of remark that in this variety of the lesion, at least so far as my observation extends, the organ never inclines downwards, but almost constantly somewhat in the opposite direction.

Next in point of frequency is the divergent variety, but even this, in comparison with that just described, must be regarded as quite rare. Of eight hundred and sixty-six cases reported in the work above referred to, it was witnessed only forty-four times, and thus far I have myself seen only three or four examples of it. The eye in this form of strabismus is rarely drawn out very far, nor is it so apt to be attended with the same amount of upward obliquity as the convergent.

All writers on strabismus appear to think that, in the great majority of cases, only one organ is affected. Thus in the article in the Philadelphia Examiner, it is stated that the distortion occurred four hundred and fifty-nine times in one eye, and only forty-seven times in both. Dr. Dix, of Boston, in a small treatise on strabismus, makes a similar remark. Of fifty cases, which fell under his observation, the lesion is said to have been limited to one eye in thirty-six. Now I am convinced from a good deal of experience that nothing can be more unfounded than this opinion; which is so much the more to be deprecated, because it is calculated to lead to very serious errors in practice. I unhesitatingly assert that in nearly all instances, at least of convergent squint, both eyes are implicated, though not in an equal degree. Usually one is more affected than the other, which the patient considers as his good eye, as it is the one which he constantly employs in viewing objects. Nor is it at all surprising that this should be the

case, when we reflect upon the remarkable sympathy existing between these structures, and upon the fact that when one is diseased, the other is very liable to take on morbid action also. Amaurosis in one eye is very frequently followed by a similar malady in the other; the same is true of cataract and some other affections. In the natural state there is a perfect agreement between the optic axes, produced by the harmonious action of the straight muscles; but when this consent is destroyed, as it is in strabismus, the eyes lose their parrallelism, and their movements become partially involuntary, especially those of one eye. Be this, however, as it may, I feel certain that, if you will examine this matter for yourselves, you will be satisfied of the truth of what has been here said. The subject, it will be perceived, is one of paramount importance in respect to the results of our curative measures; for if, when both eyes are involved, we were to operate only on one, under an impression that the lesion was entirely limited to it, our success would necessarily be imperfect, or the attempt perhaps a complete failure.

I have already said that one eye is ordinarily more affected than the other, and this, if I mistake not, will be found to be the left in three cases out of five. Such, at all events, is the result of my own experience, which differs somewhat, perhaps, from that of others. Mr. Lucas thinks that the proportion in favor of the left eye is as three to two; and Dr. Phillips, of Leige, maintains that the right organ is much more frequently involved than the other. The statistics in regard to this question are, however, still very imperfect, and not a little additional observation is necessary before it can be finally settled.

It rarely happens that both eyes become deranged simultaneously; on the contrary, one generally squints first, and after a while the other, the interval being probably very short.

Whether strabismus occurs with equal frequency in both sexes, is a point for the determination of which we have no accurate data. Of thirty-three cases on which I have opera

ted, only five were females, whereas in the fifty cases published by Dr. Dix of Boston, only nineteen were males; thus exhibiting a most marked disparity in relation to the subject under consideration. The difference is perhaps not great either way, but as it is of no moment, in a practical sense, I need not dwell upon it longer in this place.

I come, secondly, to make some remarks on the exciting causes of strabismus. These, as might be imagined, are extremely numerous and diversified. One of the most frequent is imitation. Nearly a seventh of all the cases that occur are probably thus induced. Hence our school-rooms are a fruitful source of mischief in this way, one cross-eyed child being often the cause of strabismus in many others, simply from that habit of imitation to which all young persons are so much addicted. Ophthalmia, however induced, is another and a very common cause of strabismus. I have seen a number of instances of this kind, and others are mentioned by different authors. Convulsions, eruptive diseases, such as measles and scarlet-fever, hooping-cough, derangement of the digestive organs, injury on the eye, and difficult dentition, may all be enumerated as so many causes of the affection in question. Oftentimes it arises without any assignable reason, and when the person is in the enjoyment of the most perfect health. To place this subject in a more tangible form, I beg leave to present the following table, compiled from the writings of Melchior, Lucas, Duffie, Ammon, Phillips, and others, the number of cases being three hundred and twenty-three: *

Imitation, - - - -	61
Ophthalmia, - - - -	36
Convulsions, - - - -	31
Looking fixedly or suddenly at objects in youth,	16
Injuries inflicted on the eye, - -	15
Measles, - - - -	14
Hooping-cough, - - -	11

* Philadelphia Medical Examiner, vol. iv, p. 439.

Small pox,	11
Injury on the head,	10
Looking at objects on the eye-brow, nose, inner canthus, and thumb while held in the mouth,	9
Difficult dentition,	8
Falls and blows,	7
Inflammation,	5
Excessive fright,	4
Exposure to light and heat of the fire in infancy,	3
Intestinal worms,	3
Imperfect cataract,	3
Holding the head sideways while knitting,	3
Epilepsy,	2
Looking at the sun,	2
Amaurosis,	2
Burns of the abdomen,	2
Chorea,	1
Severe whipping,	1
Watching the motion of a shuttle,	1
Fit of crying	1
Concussion of the brain,	1
Fracture of skull,	1
Ill health,	1
Supposed congenital,	17
Unknown,	41
	323

Of the above cases, seventeen, it will be perceived, are supposed to have been congenital, a circumstance admitting, I think, of some doubt. Without altogether denying the possibility of this occurrence, I am inclined to believe that many cases, considered as congenital, are in truth not at all of this description, but that they arise soon after birth, without any obvious cause, and without any knowledge on the part of the parents or friends of the infant as to the precise period of the commencement of the lesion. Judging from what we know of club-foot, strabismus may unquestionably be a connate af-

fection, and such it certainly is in some instances; all I wish to impress upon your minds is, that it is much less frequent, in my opinion, than is generally supposed.

Some writers imagine that there is occasionally a hereditary predisposition to strabismus. This is doubtful. If we sometimes meet with cross-eyed children, whose fathers or mothers are laboring under the same affection, it by no means proves that the distortion was transmitted to them in the manner in which certain maladies are transmitted by the parent to his offspring. It only shows a coincidence, which may be explained, in the generality of cases, on the assumption that the children have acquired the distortion by imitation or by some other cause, not that it was entailed upon them prior to birth. In the same manner we may satisfactorily account for the presence of strabismus in several members of the same family, of which a remarkable instance has recently been brought within my own knowledge. Of three brothers, one has three children affected with strabismus, the other two, and the third one. The parents have perfectly sound eyes, and so have the uncles and aunts, except one, on whom I operated successfully on both organs several months ago. Last November I operated for cataract on three children, belonging to a gentleman from Mississippi, who informed me that of six others at home, three were affected with strabismus. Both he and his wife, as well as their immediate relations, are free from the affection.

Strabismus essentially consists in a morbid contraction of one or more of the muscles of the eye. This, as we have already seen, is usually the internal rectus. The shortening, which varies according to the extent of the squint, always leads to a corresponding elongation of the opposite muscle, so that it gradually loses, either wholly or in part, its antagonizing influence. But few post-mortem examinations have been made of the eyes of persons laboring under strabismus; nevertheless, they have been sufficient to show that there is generally a marked difference between the straight muscles, the one affected being not only wider and thicker than the rest, but also of a

deeper color. These changes were well seen in the case of a female who died at the Hospital last summer, under the care of my friend Dr. Lewis Rogers. She was upwards of thirty years of age, and had been affected with convergent strabismus from an early period. The left eye was more distorted than the right, and the internal straight muscle of that side was, as I ascertained by a careful examination, proportionably larger than the other. This, it is true, might have been a mere coincidence; but, supposing that it was not, and that the difference under consideration really exists, as a general rule, the question occurs, is this undue development the cause or the effect of the strabismus? This is a matter which is not so easily disposed of as might at first be imagined. As to myself, I presume that most cases of this affection are occasioned originally by some perverted action of the nerves which supply the muscles of the eye, rather than of any actual lesion of these fleshy bundles themselves. What the precise nature of this morbid action is has not, and probably never will be, determined; but it is reasonable to infer that it will be followed, sooner or later, by perverted action of one of the muscles at least to which I have alluded, and which must thus, by degrees, obtain a powerful ascendency over all the rest. The resultant distortion becomes permanent, and the affected muscle, constantly occupied in holding the eye in its unnatural position, acquires a corresponding degree of development; in accordance with a law of the animal economy that, in proportion as an organ is exercised, so will be its size and strength.

One of the most unpleasant effects of strabismus is the disagreeable deformity which accompanies it, by which the individual is rendered an object of remark and ridicule. Were this confined to infancy and childhood, no evils would flow from it, but when we reflect that it continues during life, and that it is a source of constant annoyance and mortification, the influence which it exerts upon the temper of the sufferer must often be of the most unhappy kind. On this account alone, if on no other, we cannot be too grateful to Stromeyer for

having devised, and to Dieffenbach for having first practised, an operation fraught with so much blessing to a class of beings whose cases were usually regarded, until recently, as beyond our resources. But there is another effect, if possible, of a still more serious character. I refer to the impairment of the vision of the affected eye. This, which is never wholly absent, always varies with the extent of the deformity, and the length of time that has elapsed since its occurrence. In some instances, especially in those of long standing, the sight is altogether destroyed, the retina being as insensible as in confirmed amaurosis. In another series of cases, the person is myopic, or sees objects only at a short distance. In a third series the vision, perhaps, is double, or objects appear indistinct, or run into each other, the image painted on the retina being confused and imperfect.

It is a well-known fact that strabismus has no tendency towards a spontaneous cure. On the contrary, it generally manifests a disposition to increase, and this is particularly the case in children of a nervous, excitable temperament. Indeed, the very worst forms of squint I have ever seen occurred in persons of this description. The question, then, arises, at what age ought we to operate? My opinion decidedly is the sooner the better. Provided the child is in good health, and not under a year of age, I would not hesitate a moment to resort to the knife for its relief. And why should we? The operation itself is not particularly painful, and if it be attempted at an early period it will commonly be necessary to perform it only on one eye, whereas if it be deferred until the age of twelve or fifteen, as has been suggested by some, we cannot possibly get along without dividing the corresponding muscle of the opposite side. Moreover, the sight in the meantime will become considerably impaired, and the patient be an object of ridicule and insult; both of which may thus be avoided. But there is another, and, as I conceive, a very strong reason, for the early performance of the operation. We have already seen that the ocular and submuscular fasciæ are much more delicate and elastic in infancy and childhood

than at the subsequent periods of life, and they will not therefore, be so liable, if they are not extensively divided, to interfere with the success of the operation. But it may be urged that a resort to the knife at this tender age will be both difficult and dangerous; difficult because of the struggles of the little patient, and dangerous because of the great susceptibility of the nervous system. In regard to the first of these points it may be stated that the resistance will never be so great but that it may be surmounted by proper management; and, as respects the other, it is well known that it has been vastly overrated. Much severer operations are frequently performed at a much earlier period. I have seen the common carotid artery tied, successfully, in an infant of six months, and have myself repeatedly operated, with similar results, for hare-lip, and that too in the very worst forms of that malformation, within the first year. I do not, therefore, in these objections, discover any adequate reason for postponing the division of the affected muscle.

The instruments which I employ in this operation are two lid-holders, a double, sharp-pointed hook for fixing the eye, a pair of forceps for pinching up the conjunctiva, and a scalpel or pair of scissors for dividing this membrane, the two fasciæ, and the affected muscle. The lid-holders (fig. 1) are each about six inches long, made of steel, quite slender, and slightly curved at the extremity, which is perfectly smooth and polished, constructed after the manner of a fenestrated speculum, and not more than four lines wide. These instruments may be conveniently replaced by a common speculum and the finger of an assistant; still, they are very useful, and I prefer them to any other contrivance I have seen. The hook for fixing the eye is similar to that contained in our eye-cases, (fig. 2). It should not exceed five inches in length, and should be provided with a moveable slide, so as to admit of the proper separation of the branches, each of which, two lines wide, terminates in a short hook as delicate as the finest needle. The forceps should also be rather small; and the blades of the scissors,

curved on the ege, should form an angle of about 35° with the handle; they should be very narrow, and their extremities only moderately sharp. Until lately I was in the habit of employing a knife instead of the scissors, and also a curved director for elevating the muscle previously to dividing it; but as this procedure is painful, and does not expedite the operation, I have abandoned it. I now use the director (fig. 3) only to ascertain the extent of the incisions, and in this respect it is really a valuable instrument, though a common probe will answer just as well.

Previously to commencing the operation, the patient should be placed on a table of convenient height, covered with a blanket, and the head and shoulders elevated with pillows. His face, lying horizontally, should look towards the light, which, however, for obvious reasons, should not be too strong; and the sound eye be covered with a bandage or handkerchief, to enable him the better to roll the other outwards. If the surgeon is ambidexter it does not matter where he stand; but if he uses one hand more adroitly than the other, he should place himself on the right side when he wishes to operate on the left eye, and, conversely, on the left, if he desires to operate on the right. Only two assistants are necessary; one of whom, standing at the head of the patient, elevates the upper lid, and holds the eye by fixing the sharp hook into the sclerotic coat, about two lines behind the cornea; the branches should be separated one third of an inch, and the interval between them should accurately correspond with the horizontal diameter of the eye. This precaution should never be neglected, otherwise it will not be so easy to find the affected muscle. The points of the hook should be fairly implanted into the substance of the sclerotic tunic, but no more. If it be passed simply through the conjunctiva, it will be impossible to steady the eye, to say nothing of the danger of lacerating that membrane, and so inflicting unnecessary pain upon the patient. On the other hand, if it be pushed through the sclerotic coat, serious mischief, eventuating in destructive inflammation, might be the consequence. The other assistant, placed on the

side of the affected eye, depresses the lower lid, and hands the sponges to the operator. It is sometimes more convenient to let this assistant steady the eye.

Every thing being thus prepared, the operator pinches up a small fold of the conjunctiva immediately behind the hook, or, in other words, about two lines from the cornea, and makes a slight vertical incision through it with the knife or scissors, as he may prefer. Relinquishing his hold with the forceps, the edges of the wound will be found to retract, so as to be at least from four to six lines in length by two or three in breadth. At this moment there is usually some degree of hemorrhage, amounting occasionally to more than half a tea spoonful, especially if the incision has been made too far back, near the semi-lunar valve, where the parts are always more vascular than further forward. To arrest this, a small sponge, pressed out of cold water, should be repeatedly applied; or, if it prove troublesome, the operation may be entirely suspended until it ceases. The ocular fascia is now divided, and, as soon as the muscle (fig. 4) is fairly exposed, it is cut across with the scissors, one of the blades of which is passed behind it. The moment this is accomplished, the eye, from the traction exerted upon it by the hook, springs towards the opposite side, and the muscle retracts within its sheath, especially if it has been thoroughly liberated from it connexions with the ocular and submuscular fasciæ. To effect this, which I regard as of paramount importance, the scissors should be passed for some distance around the eye, nearly as far, indeed, as the margins of the adjacent straight muscles.

As soon as the muscle is fairly divided, the eye usually resumes at once its natural position in the orbit, moving, if the other be sound, in perfect harmony with it. Occasionally, however, it retains some degree of its original obliquity; in which case it becomes necessary to re-apply the instruments with a view of ascertaining the cause of the malposition. This will generally be found to depend upon an imperfect division of the muscle, or of one or both fasciæ, by which the muscle is prevented from retracting sufficiently within its

sheath. In some instances it remains without any assignable cause, but rarely beyond a few minutes, or, at farthest, a few hours.

The operation being completed, the eye is bathed in cold water, to free it of blood, and the patient is confined for a few days in a dark chamber. Light diet should be enjoined, and, if inflammation arise, recourse must be had to antiphlogistic measures. Bleeding can seldom be demanded; thus far I have not been obliged to resort to it in a single instance, a dose of salts, oil, or calcined magnesia being all that was required, and in some even this was not necessary. As a local application, cold or tepid water, as may be most grateful to the part, is amply sufficient. Occasionally there is a good deal of pain soon after the operation, with more or less constitutional disturbance, such as slight shivering, headache, and nausea; these symptoms are best relieved by warm drinks and an opiate. The ecchymosis which attends this operation, and which is sometimes considerable, requires no particular treatment: no inconvenience arises from it, and it commonly disappears in a few weeks. I have never known suppuration or abscess to follow this operation, but several cases are related by writers. Such an occurrence implies unusual violence, which cannot be too much condemned. The same remark is applicable, still more forcibly, to the division of the sclerotic coat, and the partial escape of the humors of the eye; an accident which has happened in the hands of some ignorant bunglers. For five or six weeks after the operation the patient should refrain from reading and looking at minute objects. By neglecting this precaution chronic inflammation, with weakness of sight, may be induced and kept up for several months, much to the annoyance of the sufferer.

It may not be uninteresting briefly to inquire into the process employed by nature to repair the wound made in the operation. From the distance at which the edges are separated from each other, it is obvious that it cannot heal by union by the first intention; nor have we any means of remedying this difficulty, since it is impossible in parts so delicate as

those under consideration to employ the suture. Soon after the operation is over, the margins of the incision become coated with coagulating lymph, which is sometimes effused in such quantities as to give rise to considerable pain and a sensation like that produced by the presence of some foreign body. The vessels in the surrounding structures are somewhat enlarged, there is more or less lacrymation, and the lids feel stiff and uncomfortable. The sclerotic coat at the bottom of the wound remains visible for five or six days, when it becomes covered with granulations, which, uniting with those of the sides, gradually fill up the breach, the whole process, from the commencement to the completion of the cicatrization of the conjunctiva, occupying from two to four weeks.

Occasionally, though not always, the process of cicatrization is retarded by the presence of fungus granulations. When this is found to be the case, they should be snipped off with a pair of scisors, a proceeding far preferable to the application of the nitrate of silver, which is not only more painful, but less effectual.

It has been recommended by some surgeons that as soon as the soreness occasioned by the operation has subsided, the patient should begin to turn the eye outwards, and that these efforts should be daily persevered in, until it regains its natural position in the orbit. In my early cases, before I had devoted much attention to the subject, I adopted this advice, but the result in every instance disappointed me. Nor do I now perceive any good reason for following it, persuaded as I am that it is not founded upon correct principles. Where the eye still retains some degree of obliquity after the operation, it may be positively assumed that the section of the affected muscle, or of its investing fasciæ is imperfect; how then, when this is the case, can we look for success? Again, the eye operated on may be entirely straight, and yet not move in concert with the other. This I have witnessed repeatedly, and hence my invariable rule, under such circumstances, is, to divide at once the corresponding muscle of the opposite side, for the reason already mentioned, in a former part of this dis-

courue, that the distortion almost invariably involves both organs.

The operation for strabismus is liable to occasional failure, the principal causes of which may be thus enumerated: 1. Imperfect section of the affected muscle or of the ocular and submuscular fasciæ. To this subject I have already several times adverted, and I need therefore only further remark concerning it that the operator should never neglect to divide these structures most thoroughly. In bad cases the scissors must be carried up and down as far as the contiguous straight muscles, so as to denude completely the sclerotic coat for more than a third of its circumference. The fasciæ must be effectually raked up, otherwise it will be impossible for the muscle to retreat within the orbit. 2. Excision of a portion of the conjunctiva, eventuating in contraction of this membrane during the process of cicatrization, may be considered as another cause of failure. As there is no necessity whatever for such a proceeding, since it does not in the slightest degree facilitate the operation, I need scarcely say that it should be most studiously avoided. 3. Strabismus is sometimes complicated with other diseases, such as convulsions, epilepsy, hydrocephalus, and similar lesions. When this is the case the operation cannot be performed with any prospect of success, and had better be declined altogether. The existence of amaurosis does not necessarily lead to failure; if cataract be present, it should be broken up either at the time of the operation or before. 4. But the most powerful cause of all in my opinion, and one which has not been sufficiently insisted upon by writers, is the co-existence of strabismus in both eyes, and the fact that our operative procedures are usually limited to one of these organs. Now this is at direct variance with good practice and common sense. In several instances in which only partial success attended my efforts, the cause was entirely ascribable to this circumstance, and so thoroughly am I persuaded of its importance that I have laid it down, as a rule, never to operate on one eye only when it is certain both are affected. The only exception to this is where the patient

is very young, when the section of a single muscle will sometimes suffice, though even then not always. 5. A fifth cause of failure is the re-adherance of the posterior extremity of the muscle to an unfavorable point of the sclerotica, by which it is again enabled to exert an undue influence over the movements of the eye. The manner of obviating this difficulty has been already indicated, and I need not therefore dilate upon it in this place. These, I believe are the principal circumstances which interfere with the success of the operation; there may be others, but they are unimportant and such as will readily suggest themselves to your minds.

I come now to speak, in the last place, of some of the effects of the operation. These may be considered, first, in relation to the deformity or obliquity of the organ; secondly, in respect to the sight; and lastly, in relation to the prominence of the eye and the separation of the lids.

When the operation has been well executed, the deformity, as was before mentioned, disappears either instantaneously, or, at all events, in a few hours, and the organ, there is reason to believe, ever afterwards remains straight. It is true causes may subsequently arise which may lead to a relapse, or return of the obliquity, but this must certainly be very rare, and is to be regarded altogether as an exception to the general rule.

The effect upon vison is at first rather disagreeable than otherwise; at least this is true in some instances. It is only by degrees that the affected organ regains its function, and in many cases a considerable period must necessarily elapse before this is fully brought about. Occasionally, in fact, the retina, from long disuse, or other causes, is so completely paralysed that the sight is never restored, and it is in cases of this description that we should always look for a slight return of the distortion. Another effect, and that a very unpleasant one, which is sometimes witnessed, is double vision. This is evidently dependent upon a want of agreement between the optic axes, and seldom lasts beyond a few days, unless the distortion has been but imperfectly remedied.

The only other effect which I shall notice as attendant upon this operation is a peculiar prominence of the eye. It is generally very well marked, though not equally so in all cases, and imparts to the organ a full, bold expression; it is accompanied by a considerable separation of the lids, and is caused by the liberation of the eye from its confined state.

In speaking of the operation for strabismus, I did not deem it necessary to give you an account of the various plans that have been suggested by other surgeons; I pointed out to you the mode which I have myself been in the habit of pursuing, and which I can confidently recommend to your notice, not only as safe and expeditious, but as effectual perhaps as is compatible with the nature of the affection which it is intended to remedy. There is one method, however, to which I must briefly refer, as well on account of the high authority from which it emanates, as on account of its supposed advantages. I allude to to the *subconjunctival plan*, as it is termed, first devised by Mons. Guerin, the celebrated orthopedic surgeon of Paris. The manner of performing this operation in convergent strabismus is as follows: The patient lying on a bed or sofa with his head somewhat elevated, an assistant separates the lids, while the operater inserts the double hook in the same manner and at the same distance from the cornea, as in the ordinary method. Another assistant with a delicate hook lifts up a fold of the conjunctiva, midway between the cornea and the semi-lunar valve, when the surgeon, armed with a lancet-shaped scalpel, makes an aperture into that membrane on a line with the inferior margin of the muscle, carrying the point at the same time backwards to open the investing fasciæ. Another knife,* (fig. 5), peculiarly adapted to the operation and which you here see, is then carefully insinuated beneath the tendon with the side of the blade resting nearly flat upon the sclerotic coat, when, turning the edge forward, the division of the structure in question is easily effected, being attended, it is said, with a distinct snapping sound.

*For this instrument I am indebted to my friend and former pupil, Dr. Charles A. Pope, who spent several years in Paris, and who is now settled in St. Louis.

Having never operated according to this method, I can not of course say anything about it from my own observation. Dr. Davenport, of Boston, who has executed it in two cases, thinks it posesses strong claims to a more extended trial, and enumerates the following supposed advantages: First, there is little or none of that unpleasant gaping at the inner canthus which sometimes so much disfigures those who have undergone the common operation; and secondly, there is less risk of severe inflammation, or suppuration, the patient, from the absence of an open wound, being able to go about in a short time without inconvenience or fear of injury. Both these advantages are, it appears to me, in great degree, if not wholly, imaginary; at all events, I have never, in a single instance, witnessed the disagreeable gaping spoken of by Dr. Davenport, much less any violent inflammation, or the formation of purulent matter. On the other hand, it is always attended with incomparably greater difficulty of execution, its results are more uncertain, from the impossibility of determining what parts have been divided, and lastly, it is invariably followed by extensive ecchymosis, not only of the eye, but in many cases also of the lids. For these and other reasons that might be assigned, I would discourage the adoption of Mons. Guerin's operation.

The operative procedures above described have more especial reference, it will be perceived, to convergent strabismus; with slight modifications, however, they are equally applicable to the other forms of the lesion. From the more exposed situation of the ball of the eye, the outer straight muscle is much more easily approached and divided than the internal: as to the relative facility of operating on the upper and lower, I can say very little from personal experience, but should suppose the difference, if any, to be trifling. Nor have I had occasion to cut either of the oblique muscles, and from what knowledge I possess on the subject, I am greatly disposed to doubt whether they have much, if any, agency in the production of strabismus. In several instances in which these fasciculi were divided by Lucas, Calder, and others, no im-

pression whatever seems to have been made upon the distortion, and nearly all surgeons agree in the opinion that they should not be interfered with.

Attempts have been recently made, both in this country and in Europe, to disparage the operation for strabismus, on the ground tnat the eye has a tendency to return, in a short time, to its original malposition, or that a new deviation will sometimes occur. No proof, however, of such a result, founded upon an adequate number of statistical facts, has yet been given to the profession. On the contrary, we have reason to believe, from the results that have been furnished by different surgeons, that the reverse usually happens, the operation, instead of being useless, as many have asserted, being generally attended with the most complete success. From most of my own cases being scattered over the country, I have received authentic information, as to the results of the operation, from ten only, of which eight are perfectly successful, a year or more having elapsed since the operation was performed on some of them. In these ten cases both the internal straight muscles were divided in six, in the other four one only. The former have all turned out favorably; of the latter, two have partially failed, or, rather, they have been successful as far as concerns the eye that was most affected, and the only one operated upon. Within the last few months, Dr. J. B. Dixon,* of Norwich, England, has published a list of forty-one cases of convergent strabismus, treated by division of the internal straight muscles, and which one year afterwards presented the following results: in thirty-one, both eyes were perfectly natural; in five, where one organ alone was operated upon, there was slight obliquity of the other; in two cases the squint was changed to a leer; and in three others the eye returned to its original malposition. These results are in the highest degree gratifying, and they are sufficient to show that the operation for strabismus deserves to be ranked among the established resources of surgery, which seldom exhibits such an amount of

* Boston Medical and Surgical Journal, Dec. 29, 1842.

successful terminations. Let me close the discourse, gentlemen, by laying down this maxim for your guidance in regard to the subject we have been considering—"*Never operate on one eye only, when you are certain, as you may be in ninety-nine cases out of a hundred, that both are affected.*"

ART. II.—*Phlegmasia Dolens.* By JOHN HARDIN, M. D., of Horse-Well, Kentucky.

It is not my purpose at present to inquire whether phlegmasia dolens is an inflammation of the veins or absorbents, but to suggest a method of treatment which has been pursued with great satisfaction by myself, and also by my friend Dr. Jett, of Munfordville, a very accurate clinical observer, who has recently had an opportunity to test its efficacy.

In 1837, I was requested to visit Mrs. C., who had some days previously given birth to her third child, and had been for several hours the subject of swelled leg. The pain and swelling commenced at the ankle, and had already reached the groin. I immediately applied a strong cotton roller, comfortably tight, to the whole limb, commencing at the toes and terminating with a turn around the hips, to secure it *in situ*, and directed bathing with warm water to allay pain. The lady stated that she had bathed the limb, before my arrival, with warm whiskey, in which red pepper was steeped to saturation, and had found very considerable mitigation of pain therefrom; whereupon I directed the substitution of this mixture for the warm water. It gives me pleasure to say that the application always gave immediate relief. The experiment was frequently tried, without the patient's knowledge, of wetting the roller with warm spirit alone, but it did not allay the pain; and this was tried so frequently, and with the result so unvarying, that I was satisfied it could not be imaginary. In the constitutional treatment of this case, small portions of ipecacuanha were given

at intervals of four hours, which operated as a cholagogue cathartic. No other medicine was used. Mercurials would have been administered in the beginning, but from the scorbutic appearance of the gums, the unpleasant local effects of the medicine were apprehended; and after the operations procured by the ipecacuanha were observed, nothing else was deemed necessary. In ten days the leg was well, there being only a slight, painless swelling remaining. At this time the disease attacked the other limb, and, under exactly similar treatment, was subdued in thirteen days.

Since that time, three other cases have been treated in the same manner (I mean the local treatment), and have terminated favorably, one in ten, and the two others in twelve days. In one of them, several doses of calomel and rhubarb were administered. Of course, in this, as in all other diseases, the internal remedies must be adapted to the constitutional disturbances present. In some of the cases the pain and swelling commenced in the groin, and progressed downwards to the foot.

In a disease attended with pain so excruciating as that under consideration, and one which renders the patient so utterly helpless, the advantage of the above method of treatment is incalculable, whether it be considered in reference to its power of allaying pain or of abridging the duration of the malady. The pain is absolutely under the immediate control of the remedy. In all the cases, about one gallon of the lotion was used in the first twenty-four hours, after which a quantity varying from a pint to a quart was found to be sufficient.

Believing that facts are more important as well as more acceptable to the profession, than speculations however ingenious, I submit these, unburthened with theoretical reflections.

Feb. 12th, 1842.

Bibliographical Notices.

Art. III.—*Proceedings of the Physiological Temperance Society of the Medical Institute of Louisville.* 1842, pp. 16.

This little pamphlet presents the proceedings of a Society which we announced in our January number. The time through which they run is two months, during which the Society obtained a charter from the State of Kentucky, had a certificate of membership lithographed, and a seal engraved; listened to four lectures, a report, and a valedictory, and acquired as members 137 out of the 263 pupils of the Institute. In the proceedings there are abstracts of the lectures, and a discourse, but we shall pass them by to insert the *Report*.

The Committee appointed to report how far the promotion of temperance should be regarded as a professional duty, offered the following, which was adopted and ordered to be published.

REPORT:

Extensive as may be the use of liquors rendered stimulating with alcohol, and intimately as they may be blended with our food, and the various innocent condiments, with which we stimulate ourselves, there is not, in the opinion of your Committee, the smallest necessity for their use as beverages. They impart no nourishment, and the excitement which they raise, is not only transient beyond that of many other stimulants, but followed by a degree of exhaustion, which more than counterbalances their exciting effects. Those effects, moreover, are chiefly found in the bodily desires and lower passions of the mind; and do not, therefore, prepare the individual for his duties, but, on the contrary, incapacitate him for them; which is equally true of

labors that require strength of muscle, acuteness of bodily sensibility, soundness of judgment, or tranquillity of feeling.

Nor does the habitual use of alcoholic beverages ward off any form of disease. Your Committee might, but will not, insist, that there is *no* epidemic, in which these beverages would be preventive; but they fearlessly affirm, that if there be such, the individual who has been rigidly abstinent, up to the time when he begins their use for that purpose, will be far more likely to be benefited, than he who has habitually drunk them. To the strictly temperate, they would be medicines, and might, under proper circumstances, be preventives. There are, then, no physical reasons for the habitual use of alcoholic drinks.

Let us proceed to inquire whether there be physiological objections to their use; in other words, whether they occasion diseases.

1. An agent of such great activity as alcohol, cannot be used in large quantities, without injury to health. If the excessive use of the *supporters* of life, such as food, or warmth, or air with an over proportion of oxygen, be prejudicial to health, it will be admitted, that an agent which does not, in any manner or degree, contribute to nourish the body, and is still capable of exerting on it a powerful effect, must, if used in large quantities, prove a poison. Your Committee are willing to grant, that in smaller quantities, which they cannot undertake to define, alcohol may not disorder the functions. But they concur with universal experience, when they declare, that in the use of this, as well as other narcotic stimulants, there is a constantly increasing demand by the constitution; that this demand is much more importunate in some temperaments than others; that it is strictly physical; that in proportion as it increases, the will and moral powers of the individual are weakened; and, therefore, that the danger is imminent, that the person who begins with the temperate, will end with the intemperate use of whatever alcoholic beverage he may select. The diseases generated by this excess are various, according to the variety of drink, the age and temperament of the individual, his occupation, and the circumstances which surround him. Those which your Committee have most frequently observed in this country, are inflammation of the liver, followed by jaundice and dropsy; inflammation and ulceration of the mucous membrane of the stomach and intestines, with obstinate diarrhœa; vomiting, hawking and pyrosis in the morning, and in advanced cases, almost total loss of appetite; obstinate rheumatic inflammation, and occasionally gout; a mild bronchitis with cough, accompanied by a dirty, mucous expectoration, and an offensive breath; chronic inflammation of the eyes, with puriform discharge; nettle rash and leprosy; inflammation of the brain; epileptic convulsions; tremors and debility of the muscles; palsy of some of the muscles of the face, or one of the limbs, or of one side of the body; apoplexy; death.

Not wishing to present what might seem to be an exaggerated pic-

ture, your Committee forbear to extend this dark catalogue, leaving each member of the Society to add to it the results of his own future observation.

2. When none of the diseases, just enumerated, are developed, the abuse of intoxicating drinks very often creates a constitutional lesion or distemperature, which renders wounds and other injuries, and noxious impressions of various kinds, dangerous beyond what they would be under other circumstances. Thus a slight injury has sometimes led to uncontrollable and fatal inflammation and gangrene, in those who drank to excess; and no discreet surgeon would choose to perform an important operation on an individual who was habitually intemperate.

3. Intemperance multiplies diseases and shortens human life, by the exposure to which the intemperate are subject—1st, to mechanical accidents of various kinds—2nd, to the burning sun, producing *coup de soleil*—3rd, to severe cold, occasioning the loss of parts of their extremities, frequently of life itself—4th, to the neglect of personal cleanliness, causing a filthy and pedicular state of the skin—5th, to various vices, which become causes of disease. Thus drunkenness is the indirect cause of as many diseases as are directly produced by it.

But the ravages of intemperance are not limited to the body, for through it they are propagated to the mind. Sleeplessness, disordered hearing, seeing and feeling; reverie; delirium; monomania, and general madness, ending in fatuity, and leading to suicide or murder, are among the legitimate and melancholy effects. Alcoholic intemperance demands, then, the interference and aid of the medical profession, and, in the opinion of your committee, is not unworthy of deep and anxious attention. It would be superfluous for your committee to affirm, that the duty of laboring to prevent or avert diseases, is one of which no medical man can divest himself. But, still further, every profession, as an aggregate body, lies under some peculiar responsibilities of benevolence, and in its corporate capacity should prosecute them as public enterprises; and that assumed by our Society, your Committee regard as of this kind, and hope it will be so regarded by the profession at large. It only remains, then, to consider what can be done. 1. The members of the society, and of the profession generally, may accomplish a great deal by instruction, admonition and warning, put forth while mingling with the people in their daily exercises of duty. 2. They may exert themselves in practice, co-operating with those who benevolently labor to suppress intemperance, and, in fact exerting, if they choose, a more diffusive and salutary influence than any other class of men, because of their superior knowledge of the subject, and the confidence which the community at large repose in them on a subject so strictly professional. 2. They may sometimes make, with the consent, and even at the request of the intemperate, such administrations as will raise a disgust at alcoholic stimulants; they may supply excitements of a different kind to those who would seek substitutes; they may assure the deeply

besotted, that they need not apprehend death from an instant discontinuance—and when such discontinuance is commenced, they may prescribe for the relief of the symptoms which arise from it. 5th, and lastly. They may refrain from drinking themselves, thus giving authority to their precepts and efficacy to their exhortation. Their salutary example would surpass, in its influence, that of any other class of men, while they would preserve themselves from intemperance, and redeem their profession from the opprobrium under which it has rested since it first had an existence in the West.

Your Committee know, from observation and report, and are most happy to testify, that intemperance is much less prevalent in our profession than it was thirty years ago; and they believe that diminished drinking by physicians, is one of the causes of diminished drinking by the people; but there is both room and necessity for further reform on this point, and your Committee indulge the hope, that the present and still more the future labors of our Society, will be influential in its promotion.

DANIEL DRAKE,
ALFRED MOORE,
J. BERRIEN LINDSLEY,
ALFRED ADAMS,
E. W. HORRELL,
} Committee.

We must also transcribe the following notices, commending them to the consideration of our readers.

DONATIONS TO THE LIBRARY.

Having commenced the formation of a library of works on intemperance, the Society respectfully solicits of authors, publishers, and all other persons—books, lectures, discourses, orations, addresses and reports. It is desirous, also, to obtain publications on the effects of opium, tobacco, and other narcotic stimulants. Such as are usually transmitted by mail, may be forwarded through that channel, others by private hand as opportunity may offer. The whole to be directed—'Physiological Temperance Society of the Medical Institute of Lou-'sville, Kentucky."

ORIGINAL CONTRIBUTIONS.

Intending to make a publication of its proceedings, annually, the Society is desirous of receiving original communications, of every kind, falling within its purview. Long as intemperance has prevailed in the world, the materials for its history are still imperfect, leaving ample opportunity for further observation and experiment. Our familiarity from childhood, with drunkenness, is one of the causes why our observations, as professional men, have not been so full and accurate as on many other forms of disease. The present wide

spreading conviction, that alcoholic drinks are not only unnecessary but pernicious; in short, that their effects are morbid, will turn both the profession and the people to a closer study of them as diseased states; and thus many new facts will be brought to light. All communications of this kind should be directed to the Corresponding Secretary of the Society.

We trust that these requests will not be made in vain.

ART. IV.—*Twenty-fourth Report of the McLean Asylum for the Insane.* By LUTHER V. BELL, M. D., Superintendent. Boston, 1842, p. 40,

We have read this document with great satisfaction. Like its predecessors, it is filled with important suggestions relative to the management of the insane. The statistical tables are not so copious as we would like to see—we believe them to be important elements for the formation of our opinions as to this or that place, or mode of treatment. Notwithstanding they are often abused, and made to convey more meaning than their elementary facts justify, yet they are the safest method by which we can approximate truth, in medicine and the other inexact sciences, as well as in the stricter sort; and we are very sure, that tables, founded upon the careful and conscientious observations of Dr. Bell, could not lead us astray.

The usual success of former years has followed the labors of Dr. Bell during the last year. In that period, he had 283 patients under his care: Of these, seventy-five recovered; twenty-nine were discharged stationary, twenty-four improved; two were unfit subjects, eleven died, and one hundred and forty-two remained in the asylum at the end of the year. Many of the improved were taken away by the impatience or economy of friends, and the stationary were discharged, for want of accommodations, to make room for the more hopeful. Even with these disadvantages of reckoning, we find sixty per cent. of all discharged were cured, which is a much larger success than the average of asylums has exhibited.

Dr. Bell, through his report, offers valuable considerations upon the treatment of insanity—upon the errors which common statistics unintentionally convey, for want of sufficient explanation of the minuter circumstances—and lastly, upon "the relative value of medical and moral means of treatment." Upon this last head, the views of this faithful and practised observer are peculiarly valuable.

"Each year that I have passed in this extensive field has served to diminish my confidence in an active medical treatment of almost every form of disease of the mind, and to increase my reliance upon moral means. No individual at the head of an insane institution would now think of combating any form of insanity, with the depletory and reducing means once regarded as indispensable. The practice of bleedings, violent purgations, emetics, vesicatories and derivatives, has passed away before the light of experience. A different and opposite mode of treatment by energetic sedatives, I am satisfied, is obnoxious to many objections, although far to be preferred to the first. The recoveries under their administration, occasionally most magical and most gratifying in appearance and for the present, as far as my observation and experience have extended, are neither so perfect nor so permanent as under a less decided course of measures. A *wise expectation* and a cautious use of medical agents to meet symptoms, comprise most of the aids that the pharmacopœia is capable of affording. But in relation to moral means, especially carried through as they can be only by the instrumentality of an appropriate institution, my annual experience has only exalted my confidence."

To carry out these views, it is necessary that the superintending physician should not only visit, but live in the asylum, live with and among his patients, watch every symptom and every movement, be ready for every emergency, and make his moral means as active as the varying course of his patient's diseases may require.

Under the head of moral means, Dr. B. includes, 1. Separation from friends and ordinary associations, and also the interdiction of visits, letters and the like. 2. Direction, including the application of such means as are adapted to the varying circumstances, developments, tastes and symptoms

of the different patients. 3. Classification. 4. Occupation, with every variety of employment whether useful or amusing.

Dr. B. urges upon the friends of the lunatic, to become well acquainted with the nature and conditions of the insane asylum in which they wish to place their deranged patient; "to ascertain whether they can rely upon its faith, its skill, and its kindness;" to inform the lunatic clearly and distinctly of the object of his separation, of the character of the institution and of the nature of the confinement, and thus prepare themselves and him for a long separation, if the case should require it. Then, having made their selection of a hospital, in which they can trust their friend, and having determined to abide by the judgement of the officers as to his continuance, they should leave him, without distrust or intermeddling, in their hands. For this interference of impatient friends is, and has been, one of the greatest obstacles to the cure of the insane in private institutions, which have no power to retain their patients beyond the consent of friends abroad,

"We would again say to friends, do not bring your patient to us if you can do as well or better by him at home or elsewhere; do not bring him with the impression that you are to regulate his treatment, or that any peculiar knowledge you may have of his traits of character will enable you to decide, better than the institution, where he shall be placed in its classification, when or by whom he shall be seen, or when he is in a fit state to be removed. This asylum desires to receive no patients except on its own terms; it asks no patronage; it was established to confer not to receive benefits."

It would seem that the advantages of a residence in an asylum over one at home, for the insane, would need no further proof. But when we find that not an eighth of all the insane in the nation are sent to asylums, that new cases are perpetually occurring, and are suffered to become chronic, and therefore incurable, from neglect, we are convinced that the case needs further argument and illustration. We cannot urge this matter too earnestly home to every physician and citizen, that most cases of lunacy can be cured by early removal from home and friends, from habitual associations, to a proper

asylum; and that on the contrary, most cases become hopelessly incurable, if not duly and seasonably attended to. The world, professional and non-professional, in its best condition, has not been made to feel the full force of this truth, and has, therefore, been negligent of this class of sufferers—No disease has been neglected like insanity. Derangement of the lungs, or of digestion, calls for and receives immediate and skilful attention; but derangement of the intellect or moral feeling, is strangely disregarded, or too often submitted to most quackish experiments. Hence we need to keep this subject continually before the people, until all are convinced of the necessity of early attention to the insane. Although so much has been written and published upon this in Massachusetts, still Dr. Bell finds it necessary to urge it again; and if it be needed there, where the matter has been so long discussed, it will not be out of place here, in this valley, where we have nearly four thousand lunatics and idiots abroad, and less than five hundred in our asylums.

The experience of all ages and all countries coincides in its importance, so that the general statement is fully warranted that patients seized with insanity and removed to an institution usually recover; while those treated at home generally do not. Not unfrequently removal alone has appeared adequate to effect an entire change of the diseased mental action.

If a patient be irritable, excited and violent, experience shows that he will not submit to friends as readily as to strangers. If feelings of hatred and vindictiveness exist, they will be probably directed towards those in whom he ought most to confide. If a master of a family and accustomed to direct, he will not readily and without reason as it appears to him abdicate his authority. If a child in his father's house, his insane sagacity will at once show him that he need not yield peaceably the government of himself, where the tender feelings of an afflicted family will deny the firmness to insist. If restraint becomes indispensable, a wide difference will be found in its application as administered by new hands, and by those whose experience has taught them that mildness and decision are not incompatible, and that strength and violence may distress and aggravate, but do not often calm the maniac. There should be, in fact, as much difference in a well

regulated institution in the character and extent of physical force necessary to control a dangerous patient, as applied by experienced and well disciplined attendants, and the ordinary aids called to effect the same objects in families, as there is between the leathern mittens and secure rooms of an asylum, and the chains, strait waistcoats and cages, which are deemed indispensable in furious cases without the walls of a hospital.

If hallucinations and delusions constitute the leading features of a case it is almost impossible for a patient to be removed from conversations and associations continually renewing their strength in the mind, while at home or under the guidance of those unskilled. Friends and acquaintances can hardly avoid attempting the effect of argument, remonstrances, appeals to the feelings, or even threats. It is natural that those whose experience is limited to a single case, should do so; while they who have been taught by experience the futility of such attempts, will not aggravate and excite a diseased point with continual meddling."

No part of an asylum is without its influence over the insane. It is not a matter of indifference how it is organized—nor who are employed to superintend, direct, or assist, in its administration. The superintending officers should have the highest intellectual and moral cultivation. Of their duties and responsibilities Dr. Bell says, "it can hardly be expected of the writer to touch." To those who knew him it was not necessary; for his life and practice were the argument and the explanation of these matters. But of the subordinate aids, he is more free to speak. "My present design is to urge the indispensable value of an elevated, intelligent, and conscientious corps of assistants, limited in number only by the extent to which they can be profitably and usefully employed. Had an institution a Pinel or an Esquirol for its head, with as perfect a suite of architectural arrangements as the ingenuity of man has devised, and were obliged to depend upon a few ordinary *keepers*, its character and its results must inevitably fall far below the practicable maximum."

"In cases of considerable duration, the prospect of benefit will depend upon the amount of persevering, well-directed labor which is bestowed. To secure such labor, an honorable appreciation and an adequate remuneration are requisite. In

this country, such services as those of the best attendance upon the insane, can only be had by a liberal expenditure of money. As so much aid is required in the full employment of moral means, it is manifest that a proper keeping and care of the insane, must always, as compared with the support of those of sound mind, be expensive."

"The assistants in the care of the insane must not only be well selected and well compensated, but well instructed. There are natural gifts of person, address and temper, which are not to be disparaged, but beyond these there is a tact, an aptitude, a discrimination in managing the insane, which can only be acquired by observation and practice, after being put upon the right track. Some persons with apparently adequate gifts of nature, never are able to acquire this art."

"The systemwhich has always been pursued here, is that of elevating the office of assistant. Neither the term *keeper* or *servant*, has ever been known in the intercourse of attendant and patient. The latter has always been led to look upon the former as a friend and equal." . . . . "The test question by which the character and fitness of every male and female caretaker of the insane should alone be tried is, whether under like circumstances, the director would desire his wife, children or parents, to be submitted to the same hands."

Classification is of great importance in the McLean Asylum, and the numerous buildings, and diversified arrangement of them, enable it to carry this to great extent. Thus not only injury is avoided, but great curative advantages are obtained.

"It will readily be conceived that to place a wild and frantic maniac in an apartment with a refined and timid individual, whose sole deviation from soundness is one false or delusive idea, or to permit a demented epileptic lost to all sense of decency and propriety, to sit at table with one whose intellect perhaps is unchanged, but whose affective sentiments alone are diseased, would be alike inconsistent with the happiness or recovery of the party capable of suffering." . . . . . "There is a nice adaptation of intellects, of social position, of cultivation of mind and manners to be arranged in consociation."

"Experience shows that the very highest curative advantages are effected by the mutual action and attrition of diseased minds upon each other. Emulation, forbearance, self-respect, benevolence, diversion of diseased ideas or sentiments into new and natural channels, are all capable of being secured by a proper association of different individuals."

Occupation, varied and well adapted, is still found beneficial in this institution. Dr. B. adds to his former testimony the confirmation of another year's experience of its good effects on the insane.

"The general law, both as regards the curative treatment or custodial comfort of the patient, is constant but varied occupation of body and mind. To ensure this, requires every opportunity and aid of labor and amusement. The more perfect the system of an institution, the more ample will be the provision to secure these ends. The different education, tastes and pursuits of individuals, will render it impossible to subject all to the same course in this respect. To one, agricultural or horticultural avocations; to another, mechanical employments; to a third, the fine arts or some form of busy idleness must be adapted."

Nor are these all the moral means of treating insanity.

"There are still other adjuvants, such as judicious counsel, explanations, and at a proper time even reasonings, a proper participation in the services of religion, and a regulated intercourse with the sane, all of which are of the highest utility."

We have been thus free in our extracts from this report, because this asylum is one of the oldest and best in the country, and has taken the lead in most of the improvements of the present age in the management of the insane; moreover, the full and elaborate reports of its able superintendent have described the principles and details of practice there, and we are glad to give his views a wider diffusion in the west, than they could have through his report alone.

The following extracts from "the directions for admission" are as applicable to the patients, and as useful to the asylums in the west, as they are to the McLean, from which they emanate.

"It is desired that no case (unless certainly of the most recent duration,) should be sent to the institution, unless it is determined and arrangements made, to afford a fair trial. No time short of six months can justly be considered a fair trial, and to place a patient afflicted for many months here with the determination to remove him at the expiration of a single quarter, is an injustice to the Asylum, and to the general cause of the insane.

It is presumed that the friends and guardians of every patient placed here, are satisfied that they can rely upon the skill, kindness and integrity with which he will be treated, and that they can do no better with their charge. Having arrived at this conclusion, as they should do, before committing their friend to its cares, it will be recollected as a part of the covenant, that the discretion of the Superintendent is to decide in every case upon the patient being seen by friends, or acquaintances or strangers, or visits being absolutely interdicted."

This Asylum is under the care of a Board of Trustees, who, by their sub-committees, visit the institution weekly. This duty of visitation has not been omitted for twenty-four years, with the exception of a single week. This is a guaranty for the faithfulness of these officers to their charge, and that no neglect or abuse, in those who have immediate care of the patients, can escape notice. E. J.

ART. V.—*The Principles and Practice of Obstetric Medicine and Surgery, in reference to the Process of Parturition: Illustrated by* 142 *figures.* By FRANCIS H. RAMSBOTHAM, M. D., Consulting Physician in Obstetric Cases to, and Lecturer on Obstetric and Forensic Medicine at, the London Hospital, Physician to the Royal Maternity Charity, Obstetric Physician to the Eastern and Tower Hamlets' Dispensaries. First American edition, revised: pp. 458, large octavo. Lea & Blanchard, Philadelphia, 1842.

The author of this work is the son of a celebrated English obstetrician and writer on obstetrics, and is himself already favorably known by his lectures and writings upon this department of medical science, the former of which were given to the profession through the London Medical Gazette, in 1833–4. He has also, we believe, published an "Atlas of Midwifery." Having the immediate benefit of the vast experience of his father, joined to that acquired by himself in an extensive pub-

lic and private practice, he could not fail to produce a highly valuable work, such, in fact, as we conceive the one before us to be.

The present treatise is more particularly designed for students, and seems admirably adapted to their wants. It is highly practical; the author introduces nothing that does not strictly appertain to his subject, and avoids those long disquisitions on minor points that detract greatly from some of the more popular works on midwifery. It is written in a clear and perspicuous style, in which respect, as in the one just mentioned, it offers a remarkable contrast to the treatise of our countryman, the late Dr. Dewees. The latter, though one of great value, and of more authority, perhaps, than any other medical book ever issued from the press in this country, is certainly obnoxious on the score of style, and on account of the tiresome discussions into which it enters.

In the first portion of his work, Dr. Ramsbotham gives us the anatomy of the healthy and deformed pelvis, the shape and dimensions of the fœtal head at birth, the structure of the female generative organs, and the description of the gravid uterus. These subjects take up about 90 pages, and are illustrated by numerous lithographs. In his statement of the difference in form between the male and female pelvis, we notice an error, which, however, is a very common one. He describes the sacrum as being much straighter in the male than in the female skeleton, whereas the fact is directly the reverse, as may be seen by comparing the two together.

The remainder of the work is devoted to the subject of labor, which he divides, like Denman, into four classes: 1st. Natural, 2nd. Difficult. 3d. Preternatural, 4th. Complex; and under these various heads are discussed some of the most important questions that demand the attention of the physician or surgeon accoucheur.

The first class, or NATURAL LABOR, occupies about sixty pages, wherein the process is fully and minutely explained, being traced step by step from its commencement to its final termination, or the expulsion of the placenta, at the same time

that ample details are given touching its management, and also respecting the conduct and duties of the accoucheur during its progress and subsequent to its completion. All this is illustrated, wherever practicable, by beautiful and accurate engravings. We would dissent from but one thing in this portion of the treatise, and that is, the arrangement of head presentations into eight varieties; too much refinement in this respect always tends to defeat the very object for which it is proposed, and to perplex rather than enlighten the student.

The second class of labors, DIFFICULT OR LABORIOUS, embraces two orders, the *lingering* and *instrumental*. The causes of the former are discussed at length under two heads—those referable to the mother—and those in which the ovum is at fault. Instrumental labors, the second order, are subdivided, first, into those accomplished by instruments perfectly compatible with the life of the child, and the safety of the mother's structures; and, secondly, those in which either the child must be sacrificed, or a cutting operation performed on the mother's person. Under these two subdivisions, he treats of the forceps, both long and short, their application and the indications for their use; of the vectis, and the relative advantages of this instrument and the forceps; of craniotomy, the cases requiring it, and the instruments necessary to its performance; of the Cæsarian and Sigaultean operations; and lastly, of the induction of premature labor. He does not fail constantly to impress on the mind of the young practitioner that nothing short of the most urgent necessity will warrant him in taking an obstetric instrument in hand, and that in no case is such aid to be thought of, save as a last and only resort. As to forceps, he prefers the straight ones of Denman, and these he recommends to his junior brethren, at least in the commencement of their practice, in preference to those with Leveret's, or any other lateral curve.

In speaking of the induction of premature labor he notices a mode of practice, which, as it is of recent introduction, may be new to some of our readers. After describing the methods in use, he says:

"Being impressed with the great advantage of preserving the membranes whole, I made some experiments with a medicine (ergot) now well known, and found expulsive action soon follow its exhibition in all the instances, with very few exceptions, where I administered it.

After a great number of trials, however, I observed that, although the mothers recovered as well as if they had gone through an ordinary labor, their systems not being in any sensible degree injuriously affected by the drug, (and in some instances between thirty and forty doses were taken,) yet that the proportion of children born still was greater than when the membranes were punctured. This I attributed to the baneful influence of the medicine upon the fœtus. I was consequently led to modify the practice; and I am now in the habit of administering four or five doses at intervals of four or six hours, and of rupturing the membranes after their exhibition. I have generally remarked that the os uteri has become soft, and mostly somewhat opened under the action of the drug; and the increase of live births has been larger when this system was followed, than after any other which I have tried."

The third class, OF PRETERNATURAL LABOR, likewise embraces two orders: first, those in which the breech or any part of the lower extremities presents; second, those in which the child offers itself transversely—*cross-births* properly so called. The various presentations, with the management they require, are carefully described, in the comprehension of which the student is greatly aided by the figures that accompany this portion of the work.

COMPLEX LABORS, the fourth and last class, comprise all not included in the former, and are divided into ten orders: 1st. labors complicated with hemorrhage; 2nd. with convulsions; 3d. with ruptured uterus; 4th. with lacerated vagina; 5th. with ruptured bladder; 6th. with syncope, independently of hemorrhage, or any extensive laceration or other lesion; 7th. with descent of the funis by the side of the head, or breech; 8th. with descent of the hand by the head or breech; 9th. labors in which monsters are produced; and 10th. in which there is a plurality of children.

The reader will not fail to observe that cases are here grouped

together, differing widely from each other in their nature, and requiring great diversity in their management. Yet, for purposes of instruction, this arrangement is perhaps as good as any other; a multiplication of classes would be both inconvenient and perplexing. In this part of the work, as throughout the whole, the principles and rules of action, such as they have been deduced from the largest experience, and sanctioned by the best authorities, are distinctly and clearly set forth.

We have thus given a hasty synopsis of the various subjects treated of in this volume, in lieu of a regular analysis of its contents, for which we have not space at present. We do not hesitate to recommend it—the book, we mean—to our readers, believing it to be, for elementary instruction at least, a most excellent one. To the student, such a work would seem indispensable; and we may be permitted to add, that if, with its lucid text, and admirable illustrations, he should fail to acquire a respectable knowledge of the principles and practice of obstetric medicine and surgery, he had better give up the attempt in despair. C.

Art. VI.—*The Practice of Medicine; or, a Treatise on Special Pathology and Therapeutics.* By Robley Dunglison, M. D., Professor of the Institutes of Medicine, &c., in Jefferson Medical College, Philadelphia; Lecturer on Clinical Medicine, and attending Physician at the Philadelphia Hospital, &c., &c. In two volumes, pp. 572—750. Philadelphia: Lea & Blanchard, 1842.

Professor Dunglison is certainly a man of the most prodigious industry, to say nothing of his talents, which are doubtless of a high order. The present treatise constitutes the seventh that has been furnished by his prolific pen within the last twelve or thirteen years. His first production, entitled "Commentaries on Diseases of the Stomach and Bowels of Chil-

dren," appeared in England in 1824, a short time before he emigrated from that country, of which he is a native, to the United States, to assume the duties of a teacher of medicine in the University of Virginia, to which he had been invited by President Jefferson, the distinguished founder of that excellent institution. Like the early efforts of Cooper and of Bulwer, the work in question fell still-born from the press; it was severely criticised by the reviewers, and no reprint of it has ever appeared in this country. All his other works, however, certainly the majority of them, have been well received by the profession, and one of them, "Human Physiology," has already reached the fourth edition. Scarcely forty-five years of age, he has published a greater number of works than any other physician on this side of the Atlantic, whether dead or living. To him writing seems to be no labor; books come to him almost at a call; he has only to say, "let there be a book, and a book there is." In addition to his various medical productions, Professor Dunglison has been editing for some time past a medical periodical, one of the most valuable, by the way, in the country, and has contributed some very learned articles to several of our literary reviews.

From the immense amount of labor, both intellectual and physical, which he has accomplished, one would suppose that the Professor was a thin, emaciated, Smike-like personage, or still worse, prematurely old and grey-headed, with a body bent like that of poor Scarron in the form of a Z. Not so, however. He is really a fine looking man, whose whole exterior is indicative of the most vigorous health, whose enbonpoint would do honor to an alderman, or even "my lord-mayor," who has none of that irritability which so much worries and frets the poet, especially those in high places—the garret and the attic, and whose social qualities are as rare as they are delightful. Notwithstanding his immense labor as an author, he possesses a sort of ubiquity truly remarkable. Go where you will in Philadelphia, you find the Professor. Does a stranger of distinction visit the city, he is the very first to call upon him; in the morning he is at the Blockley Hospital, or in

attendance on his private patients; in the afternoon he saunters forth in pursuit of health or recreation; in the evening he is at a party, or perhaps at the rooms of the American Philosophical Society, of which he is the corresponding secretary, and one of the most useful and active members. But when, asks the reader, does the Professor find time to compose his works? Not certainly in the morning, nor in the afternoon, nor yet early in the evening; no, these hours are all occupied in other pursuits; it is late at night, at midnight, if you please, when other men are wrapt in sleep and dreaming, *not of what they have done, but of what they intend to do,* that he produces those works which have made his name so honorably known in America and Europe, and so closely identified it with the history of medical science and literature in the nineteenth century.

Having said thus much about the *man*, we need not make any particular comments on his recent *production*, as our object merely is to attract to it the attention of the profession. Like its predecessors, it bears the impress of sound judgment, profound research, and extensive acquaintance with the labors of others in the same department. Next to the "Physiology," it is decidedly the best and most finished of his works. The arrangement is admirable, and the whole is executed in a manner highly honorable to the talents and learning of the distinguished author. If we mistake not, it will be extensively sought after by the profession, and adopted by many of our schools as a text-book. That it will supersede most of the treatises on medicine now in use among us, there can be no doubt. The mechanical execution is worthy of the matter; the paper and typography are excellent; and the *tout ensemble* is such as to induce the conviction that, in book-making at least, we are but a step in arrear of old England herself.

G.

Selections from American and Foreign Journals.

Lugol's Lecture on Scrofula.—The London Medical Gazette for October, contains reports of three lectures on scrofula, by Lugol, of St. Louis Hospital, Paris. These lectures present a very good view of the present state of knowledge on this important subject, and we believe that our readers will be pleased to possess an abstract of them. After noting the importance of the subject, from the frequency of scrofulous disease, Lugol remarks, "that so deeply does scrofula modify the whole organization, that persons afflicted with it may be considered as a *variety of the human race.* Not only is scrofula transmitted by scrofulous parents, but it will often affect all the children of a particular family when the parents fall into a particular state of health (not scrofulous); scrofula though presenting many varieties, is yet *one disease.* M. Lugol recognizes 5 forms—1st, tubercular—2nd, catarrhal—3d, cutaneous—4th, cellular—5th, osseous. Sometimes these forms appear separate; more frequently they are accumulated in the same person, two ore more of them.

1st. *Tubercular Scrofula.*—This is undoubtedly the most important form of scrofula; tubercles co-exist with all other forms of scrofula, they are the emblem of the disease—they are scrofula.

Tubercles are found in every region of the body, in every elementary tissue, in every organ, but wherever found, their anatomical and physical characteristics are the same.

Form.—They are round or ovoid, this is the primitive form, but it is often modified by their agglomeration; when not impeded in their development they always assume this form.

Volume.—In their origin very small, and even when fully developed not going beyond certain limits. These vary in different organs; in the lungs they never exceed the size of a

small pea; in the spleen they are larger, often the size of a bean. In the liver they are larger still, the size of a large olive; this is generally speaking the utmost size that tubercles attain; when they appear larger, it is often because several are agglutinated together. When situated in a region abounding in cellular matter, tubercles sometimes attain the size of an egg or an apricot. In parenchymatous organs they never attain this size.

Color.—Generally whitish grey, tinged with yellow, resembling the kernel of a horse.chestnut. The yellow becomes more decided as the tubercle softens. Modifications of the color are very rare. M. L. has seen them of a bright yellow; (qr. from *Jaundice?*) he has seen, though rarely, a mixture of tubercle and melanic matter.

Density.—This varies with the period of development; when of a size to be appreciated by the naked eye, they are hard and solid, forming the granules of Laennec and Bayle. Lugol thinks that this is not their first state, but that they follow the general law of organized bodies, and are fluid before they are solid.

Anatomical Structure.—Tubercles consist of a cyst or capsule, and a contained matter—tubercular matter. Anatomists have denied their vascularity and attempted to explain their growth by the juxtaposition of tubercular matter, secreted by the tissue in which the tubercle is lodged. Lugol thinks that this explanation does not account for the regular growth of the tubercle, and he also claims to have demonstrated the vascularity of these bodies; he says, that "when congestion or inflammation exists, their vascularity is often quite manifest; not only so, but their congestion may lead to rupture of the vessels, and effusion of blood in the substance of the tubercle," of which he communicated a very striking case, in 1828, to the Acad. des Sciences.

Tubercular Tumors.—These are constituted of the aggregation of many tubercles—sometimes the line of demarkation can be clearly made out on incising the tumor—sometimes it is quite lost, the mass appearing homogenous, and then again we meet with cases in which the wall of original separation gradually becomes less and less distinct, till finally it disappears altogether.

Seat of Tubercles.—Many pathologists insist that tubercles are always developed in lymphatic ganglia, while many, on the contrary, assert that tubercles are in fact only lymphatic glands, which have undergone the tuberculous degeneration. Some have even gone further and called tubercle *glanditis*,

thus asserting the inflammatory nature of a disease which only developes itself in persons of debilitated constitutions, and in which antiphlogistic means are most absolutely contra-indicated. Tubercles do not originate in any tissue or in any organ exclusively, nor are they the product of degeneration; every tissue is capable of becoming the matrix in which tubercle may be developed by the agency of those general and hitherto unknown laws to which their production is owing.

Once in being, tubercles go through different periods of development, like all other accidental tissues. Although found in every organ and in every tissue, tubercles are most frequent in parts abounding with cellular tissue, and in lymphatic glands; yet they are found in such parts as the brain, spinal cord, &c., in which no lymphatics have ever been demonstrated. It is in the cervical and inguinal regions, and in the thoracic and abdominal cavities, that tubercles are most common.

Sub-cutaneous Tubercles.—These are the most striking manifestations of the tubercular diathesis. In the cervical region, sub-cutaneous tubercles have long borne the name of scrofula or kings-evil; indeed with the older pathologists, scrofula meant only the cervical manifestation of tuberculization.—Even in our own day different names are given to tubercles, according to the region or organ in which they appear: mesenteric tubercles are tabes mesenterica—pulmonary tubercles, phthisis—tubercles beneath the skin are often called tumors. These have all been studied apart, and not as they should be, as mere chapters in the history of tubercular scrofula. Cervical tubercles scarcely ever exist alone, nearly always, not to say always, they are accompanied by tubercles in some region into which the eye cannot penetrate. They are usually small in very young children, and often stationary for a long time; about the end of the first or second septennary period, they increase in size and give rise to tubercular tumors. These may exist on one or both sides, but they are rarely equally developed on both sides. A remarkable fact is that these tumors, however large, do not interfere mechanically with the organs in the cervical regions. Mastication, respiration and deglutition are rarely affected, even by very large tuberculous tumors; this is importont in diagnosticating them. Cervical tubercles are often suspended in branches from the mastoid process, sometimes they extend from that point to the chin, like a collar; they may occupy the sub-clavian hollow, descending beneath the clavicle, and forming a chain with the axillary or mediastinal tubercles. Sometimes they can be

traced along the course of nerves or vessels, with whose action they rarely interfere. These remarks equally apply to axillary and inguinal tubercles, which often co-exist with tubercles in other parts. Tubercles are found beneath the skin and sometimes extirpated, being mistaken for sebaceous tumors. This is always useless and often injurious.

Development of Tubercles in the Splanchnic cavities.—Tubercles are more frequently seen in the posterior than in the anterior mediastinum, and when they occupy both places, those posterior are largest and most developed. Their presence here generally coincides with their existence elsewhere. They rarely interfere with respiration or deglutition, even when the trachea or bronchia are surrounded by them. Now and then they contract intimate adhesion with the lungs and when they soften and suppurate, ulceration of the pulmonary tissue may ensue.

Tubercles are exceedingly frequent in the peritoneal region in children. In the adult, though frequent, they are rarely accompanied by those symptoms of marasmus, by which their existence in the child is attended. The presence of numerous tubercles in the mesentery is perfectly compatible with good general health. Mesenteric tubercles whether more or less developed, are nearly always perfectly distinct from the lymphatic vessels and ganglions; this explains the compatibility of their existence with a good state of general nutrition. They acquire here a very large size, larger than any where else. What is remarkable, they rarely cause ulceration of the parietes of the intestinal canal, the cœcum nearly alone seems capable of contracting adhesions with them; this is owing to the mobility of the other parts of the intestinal canal; the intestines get out of the way of the tumor as it grows.—*N. Y. Med. Gaz.*

Extract from a paper on the Treatment of Varicose Veins by the needle and twisted suture. By T. B. Peacock, Esq., late House Surgeon to the Chester Infirmary, &c.—I was first led to make trial of this plan from reading the report of a case by Mr. Melvin, in the number of the London Medical Gazette for July 7th, 1838, and I have since applied it myself, or seen it made use of by the surgeons to the Chester Infirmary, in at least thirty cases, of several of the most important of which I have retained notes. The plan adopted has been that recommended in the paper referred to, of passing a common

curved suture needle under the vein, constricting it with a thread in the figure-of-8 form, and having turned the needle on its side, retaining it there by straps of adhesive plaster: at the end of two or three days, the ligature, if only moderately tightened at first, will require to have a fresh one passed over it; and in two or three more the needle may be removed. Several different methods have been proposed for effecting the obliteration of the vein by the needle; but this, which was originally introduced by Velpeau, as being the most simple, is that which I have always adopted. The length of time which it will be necessary for the needle to remain will depend on whether it is intended simply to excite suppuration, or to ulcerate out; the last being the course which I have usually followed, as in one or two instances, in which the needle was withdrawn after exciting suppuration, the obliteration of the vein was found not to have been effected. This plan has, however, been objected to as leaving a sore difficult to heal afterwards; but in only one instance have I seen it attended by any such result. For the needle to ulcerate its way out, the time usually required will be from a week to ten days; but it will vary greatly according to the state of the part in which it is applied: in the immediate neighborhood of an ulcer, where the skin is thin and inflamed, a day or two will often suffice to commence the ulcerative action, and three or four for the needle to escape; while, when inserted some distance from the seat of the disease, and beneath sound integument, the process will require ten days, a fortnight, or even longer. Thus, in a case lately under my charge, where the needle was inserted beneath a tender sinus on the instep, leading to a small ulcer about an inch above, it ulcerated out in three days; while at the same time, in another case, a needle was placed under each saphæna, and one beneath the common vein, at their point of union; the needle on the anterior branch was not removed till the twelfth day, and the other two not till the nineteenth. I have since seen two instances in which the needles were retained till the end of the third week. Generally speaking, when inserted over a bone, they excite ulceration more rapidly than when upon soft parts; and I am inclined to think that, in the last situation, they are more apt to give rise to an undue degree of inflammation: at least, in the only two cases in which their application was followed by troublesome abscesses, they had been inserted beneath sinuses in the calf of the leg. Considerable pain is sometimes excited by the operation, but it usually soon subsides; and I have not, in any instance, known tenderness to extend in the course of the

vein above two or three inches from the point of constriction; and in none has it resisted ordinary treatment: indeed, in no instance which I have seen, have any serious symptoms resulted from the operation.

The cases in which I have found this treatment applied, have been in small irritable sores remaining after the bursting of large varicose sinuses, inveterate ulcers connected with a generally enlarged condition of the veins of the limb, and œdema of the leg and ankle, either simple or attended with a serous discharge from the skin; and in all of the cases but two in which I have seen it had recourse to, the results have been most satisfactory; and in these, as only one needle was inserted, and other sinuses were left unobliterated, success was hardly to be expected. The number of needles which I have generally seen inserted has been three or four in each limb, but, in some instances, five or six have been applied; the rule adopted having been generally to insert in a case of varicose ulcer one under each enlarged vein, an inch or so below the ulcer, and again on each trunk a few inches above it, selecting for the points of their insertion the largest sinuses. Sometimes I have adopted the plan mentioned by Mr. Dodd, of placing on each vein two needles an inch or an inch and a half apart, so as to effect adhesion of the sides of the intervening tract; and in these cases the main trunk will, after the cure is effected, be often found contracted to a firm cord up to the point at which the next large vein communicates with it; while, where a single needle only is inserted, the portion of the sinuses around is often not affected by the operation.

The effect produced on the sore by the obstruction to the course of the large veins in connection with it, is often most rapid; the inflamed margin gradually subsides, the edges become depressed, granulations spring up, and cicatrization quickly proceeds; and sores which have been liable to bleed entirely lose that tendency, the granulations becoming firm. I have, however, observed what has been noticed before by Mr. Dodd, that the healing process was not equally rapid throughout, the good effect produced by the needles sometimes gradually subsiding, and considerable difficulty being experienced in obtaining the entire healing of the sore.

In this way ulcers which had long been under treatment, without deriving any advantage, have, in several instances, been cured, and others which were found to return as soon as the patient resumed his work, have, by the aid of a laced stocking, been kept healed; indeed, not only does it appear to be a rapid method of effecting the cure of these cases, but I

am inclined to regard it also as a more permanent one. The first case in which I made trial of the practice was one of œdema of both legs, attended with excoriation of the skin, and a fœtid discharge, connected with a very varicose state of the large veins. The man, by trade a rope-maker, had been repeatedly under treatment before with very partial benefit; and no sooner did he resume work than the disease returned. On this occasion he had been subjected to the ordinary treatment during a month that he had resided in the infirmary, but with little or no advantage. Under these circumstances, as the case seemed to offer a fair opportunity for treatment with the needles, three were inserted beneath large sinuses in one leg, which was nearly well before the same plan was adopted in the other. He was discharged, entirely cured, on needles being introduced in the other limb, in six weeks from the commencement of the treatment. Two years have now elapsed, and he continues perfectly free from any return of his complaint.—Of two men one had suffered from varicose ulcers on both legs for nine years, the other for five; and both had been several times under treatment in neighboring infirmaries, but no sooner did they return to their work, that of cotton-spinning, than the ulcers again broke out. Seven needles were inserted in the legs of one, and three in the other, and both were cured, one in seven, the other in three weeks, and continued so for at least four months, during which I had an opportunity of noticing them. Indeed the absence of any pain, swelling, or weakness in the limbs, which they said, as healed before, they had always found to continue, and the sound appearance of the cicatrices, afforded a fair prospect of permanent cures having been effected. The state of the limb afterwards, and the pale, healthy-looking cicatrices, form a great contrast between cases treated by this and by the ordinary methods. I had a case recently under my charge, in which an ulcer, fully the size of the palm of the hand, was entirely cured in little more than a month, and this notwithstanding that copious suppuration was excited by the needles in the cellular membrane of the calf of the leg. This patient had previously been subjected to treatment for four months, with every advantage of circumstances for the cure of a sore in the same situation; and the case was further interesting as being attended by severe pain in the sole of the foot—an occurrence which was met with in one of Mr. Dodd's patients—and having been an old man of 70; while Bonnet, in an essay on this subject, published in Paris, has stated that the operation will not be successful after the age of 60, in consequence of the

indisposition of the blood to coagulate, and that it should not be attempted. I heard of the man several months after his discharge; he was following his work and his limb continued sound. I regret that, in consequence of most of the patients on whom the plan was tried in the infirmary residing at a distance, I am not able to speak of them after they left the institution.

The above remarks were written more than twelve months ago. I have now nothing further to add than that additional experience fully confirms the opinion expressed of the safety and rapidity of the cure of disease dependent on varicose veins, by the plan referred to, and I have reason to regard it as also a permanent one, care being of course taken to support the limb by a laced stocking or bandage, as otherwise the same cause which gave rise to the varicose condition of the veins will lead to the dilatation of fresh ones.—*Philadelphia Examiner*, from *London Med. Gaz., Nov.* 5, 1841.

Quackery and Humbug.—Inflammation.—The Medical Society of London held its first meeting for the session on the evening of September 27, 1841; Dr. Clutterback, president, in the chair. There was a very full attendance of members and visitors. In some preliminary observations, Dr. Clutterbuck took occasion to allude to several kinds of "quackery" and "humbug" which have lately prevailed, to a certain extent, in the profession. He particularly alluded to some new operations for defective vision, to operations for stammering, and to mesmerism. He classed the three together as being equally worthy of condemnation. He could not help expressing regret and surprise, that such proceedings as those should obtain even a transient notoriety in a profession so strictly one of fact as that of medicine. When, however, they did, unhappily for the public and the profession, succeed in obtaining dupes, then it was the duty of societies, like the Medical Society of London, to expose and condemn the fallacies. This was one great benefit which medical societies conferred upon the public.

After some further observations on the mode of conducting proceedings in the society, a paper was read from the pen of the president, entitled an "Attempt to show that most Diseases originate, directly or indirectly, in Inflammation." The paper was long and elaborate, and we can scarcely venture upon an abstract of it in the present Lancet. Suffice it to say,

that by a course of very ingenious reasoning, the author endeavored to show, that almost all diseases, except those which might be considered as merely symptoms, had their origin, more or less remotely, in that state which is denominated inflammation. This inflammation might be of such a character as to be at once recognized, or it might be so insidious as to destroy life, before its presence was detected. Happily, however, the practitioner had, most generally, sufficient evidence of its presence; for, although the four more ordinary signs of inflammation—heat, redness, swelling, and pain—were not to be detected in all cases of inflammation of the vital organs, still, when these were inflamed, there was such an exaltation of the vital properties, so general a febrile state, such an interference with the function of the organ, and such evidence of sympathy manifested by other and remote organs, that the diagnosis was rendered less difficult than it otherwise would be. The author proceeded to enumerate various diseases which originated or were accompanied by inflammation; and concluded by observing, that out of the one hundred and fifty genera enumerated in the nosology of Cullen, one-half of them were merely symptoms or varieties of disease, and not diseases themselves. Of the remaining genera, another half had their origin in inflammation.—*Medical Examiner*, from the *Lancet*.

Detection of Arsenic Acid. By M. Elsner.—It is well known that M. Runger discovers free sulphuric acid by covering a porcelain dish with a solution of one part of sugar and thirty parts of water, heating the dish by exposure to steam till it acquires the same heat, and then dropping on it the liquid supposed to contain the free sulphuric acid. A black color indicates the presence of this acid, because the greater number of other free acids do not decompose the sugar in this manner.

I have found that arsenic acid acts in a peculiar manner, producing on the porcelain coated with sugar a beautiful scarlet red color. The reaction is sensible with a liquid containing only $\frac{1}{1500}$ of arsenic acid. The action of the arsenic acid produces on the sugar ulmic acid, which brings the former acid to an inferior degree of oxydation.—*Journal of Franklin Institute*, from *Annal des Mines*.

Pulse of Children at the Breast.—M. Trousseau has inserted in the *Journ. des Connaissances, Med. Chirurg.* an interesting memoir on this subject. He gives first an abstract of what MM. Billard, Valleix, and others, have written on the pulse of infants at the breast. From them we find that before birth, and during pregnancy, the average of the pulse is 133 in the minute; that it falls to 83 at the moment the child is expelled; and that in some minutes after it rises to 160. In the course of the first day it falls again to 127, and continues gradually to diminish during the ten first days, its average being then from 87 to 90 per minute. The above numbers are only the average formed, as the variations of the pulse are very great in the new born infant. The following are the results which M. Trosseau has obtained. In infants from eight days to six months old, the average number of pulsations for boys was 131, and for girls 134; from six to twenty-one months, the average for boys was 113, and for girls 126, but along with the authors above cited, he found that the extremes were frequently far above or below the average.

The states of waking and sleeping have a much more sensible influence on the pulse than sex. M. Trousseau found that in infants from fifteen days to six months old, the average of the pulse was 140 during waking, and 121 during sleep; and in infants from six to twenty-one months, 128 during waking, and 112 during sleep; and this difference is still more marked when the child is afraid, cries, or struggles, when the physician is feeling its pulse. In these cases he has seen it rise from 112 to 160 and 180.

To sum up—the pulse of children at the breast varies from 100 to 150. After the first two months, it is a little more frequent in females than in males; and it is about twenty pulsations higher in a state of waking than it is during sleep.

The most important result of these researches is to show the impossibility of discovering a febrile state in infants, from the pulse alone.—*Am. Journ. Med. Sciences* from *Journ. de Med. et de Chirurg. Prat.*, Aug. 1841.

Fibrin, Albumen, Casein, as Elements of Nutrition. By Prof. Liebig.—These substances have this character in common, that they all comport themselves alike in regard to concentrated hydrochloric acid. They all dissolve in this acid with the aid of heat, and, kept for a time in a higher temperature, first assume a beautiful lilac, and then a rich violet

blue color. At this stage of the decomposition, each of the three substances reacts in the same way with carbonate of ammonia, and other reagents. Repeated analysis in the laboratory of Liebig, has in fact shown, that these three substances have the same elementary composition. The gases obtained by burning these substances with oxide of copper, consist in eight parts by volume of seven volumes of carbonic acid, and one volume azotic gas. The dried flesh of the ox, the deer, the cod and pike, and blood do not differ in composition. Extending our inquiries to the azotized articles of food consumed by phytivorous animals and man, vegetable fibrine (gluten), vegetable albumen, and vegetable casein (a substance which is contained abundantly in all oily seeds), we find that these substances have precisely the same composition as the equivalent animal proximate principles; they consist of eight volumes, seven volumes being carbonic acid, and one volume nitrogen. There is, therefore, absolutely no difference between the azotized elements of nutrition made use of by the phytivorous and the carnivorous tribes of animals.

But a large proportion of substances used as food by phytivorous animals—sugar, gum, starch—contain no azote, and cannot minister to the formation of muscles, nerve, &c.—what purpose do they serve in the economy? They are in the first place, by the loss of an atom or so of oxygen, converted into fat, and the question now comes to be, what is the object of the fat which we see so generally accumulated among animals? At every period of life, man and animals are exposed to ceaseless causes of decay, through the influence of the air of the atmosphere. With every breath, man parts with a portion of his body; in every moment of his life he produces a quantity of carbonic acid, the carbon of which must be replaced by that which is contained in the articles consumed as food.

Now, if we observe an animal or a man in circumstances in which he takes no food, in the state of disease when the body is not renewed, when it has not that restored to it from without, which it loses in the course of its own vital processes, we see that the fat immediately begins to disappear, that the body wastes. The fat, in fact, escapes through the skin and from the lungs, in the shape of carbonic acid and water; we find no trace of it either in the feces or the urine; it serves as the means of withstanding the influence of the atmosphere; it serves for the defence of the various organs. With the disappearance of the fat, however, the influence of the atmosphere does not cease; the other soluble parts of the body re-

place the fat, and yield their carbon in the struggle. At length all resistance ends, death ensues, and, putrefaction commencing, all the parts of the body enter into combination with the oxygen of the atmosphere. In the greater number of diseases that are called chronic, death follows through the influence of the atmosphere—through a want of resistance against the oxygen of the air. It is the carbon of the vital organs, of the nerves and cerebral mass in especial, that is expended in this direction. In the normal or healthy state, the carbon that is expended in the production of carbonic acid, must needs be derived from other sources.—*London and Edinburg Monthly Journal of Medical Science*, Nov. 1841, from *Ann. der Chemie und Pharmacie*, Aug. 1841.

On Milk.—At the meeting of the *Acad. of Sciences*, on the 6th June, M. Donne communicated some observations on milk. Before the researches of the author, it was generally believed that milk is acid on being drawn from the breast; but M. Donne proved that the fresh milk of the human female, and of the female ass, is alkaline; as for the milk of the cow some doubts still remained, because it is almost neutral, and has the curious property both of turning blue test-paper red, and of restoring the blue color of paper that has been reddened by an acid. Sometimes, indeed, cow's milk is acid; we then discover by the microscope, that the milk-globules, instead of floating separately in the fluid, (as is the case in healthy milks) are collected together in little masses, and it seems probable that this change depends on the commencing coagulation of the caseum. In a recent case where it was a matter of the utmost importance to obtain perfectly pure milk, the author found this alteration in the milk of a cow which had been selected for her healthy appearance. The milk was acid, and the globules agglomerated.

At the previous meeting M. Donne communicated the results of some experiments with milk, which he had performed on various animals. Milk of different qualities was injected into the vessels and great cavities of dogs, horses, goats, frogs, &c. Milk of good quality had no bad effect when mixed with the blood; while, on the contrary, unwholesome milk gave rise to various accidents and sometimes occasioned death. *Am. Jour. Med. Science*, from *Prov. Med. Jour.*, June 19, 1841.

A New Medical Journal in Boston.—It will be seen by an advertisement in to-day's Journal, that some preliminary efforts have been made with reference to the establishment of a quarterly Journal of Medical Science in this city, which, instead of exciting any alarm in regard to the effects it may produce on our own long cherished periodical, has our best wishes for its success. The gentlemen who are to be the editors, are competent to conduct its course with dignity and renown. Once or twice within the last few years, attempts have been made in this place to usher into existence a new medical periodical, but somehow they were smothered in embryo. The present enterprise, it is hoped, will succeed better. We never entertained an idea of monopoly in the way of Journalizing; the wonder is, how it happens that we have been, so many years, unmolested occupants of the field. Since there is room enough for more, and talent enough in this city and in New England to sustain half a dozen quarterlies, of the highest order, it only remains for the profession to contiuue their liberal patronage to the Boston Medical and Surgical Journal, and withal offer such pecuniary assistance as shall likewise place the contemplated quarterly on a firm foundation. Any facilities which we can offer through our own pages, towards forwarding the operations of the projectors, is cheerfully tendered to them.—*Boston Med. and Surg. Jour.*

Six Cases of Diarrhœa treated with Monesia. By Q. Gibbon, Salem, N. J.—Case 1st.—Mrs. K.—Married. Had labored under chronic diarrhœa accompanied with ulceration of the intestines for two years. Three or four months ago she was put upon small doses of acet. of morphia, which, after several weeks continuance, arrested the disease, and the patient remained for two months apparently perfectly well. At the expiration of this time the disease suddenly returned, and soon regained all its former activity. The extract of monesiæ was now commenced in doses of 5 grs. three times a day, and afterwards increased to 7 grs. four times per day, and continued for ten days, but without any other benefit than a slight decrease of the discharge for the first two days. The medicine was then discontinued, and the morphia substituted with its former success.

Case 2d.—A child of W. H., affected with diarrhœa of 18

months standing, had used anodynes, alteratives and astringents freely, but without permanent benefit. The ext. monesiæ given in doses of two grs., three times per day, assisted by the warm bath and frictions with flannel, checked the discharges in two days, and removed all traces of the disease in two weeks.

Case 3d.—J. M., aged 70—health delicate, had a diarrhœa, with short intermissions, for six months—had been treated with creta cum hydrarg. with but temporary relief. Took six grs. of monesia four times per day, from the 2d to the 10th of November, assisted by a few grains of pulv. doveri., occasionally, at bed time. The discharge ceased in two days, and upon the tenth he expressed himself perfectly well.

Case 4th.—Mrs. J.—Diarrhœa of four or five days continuance—slight fever, tormina, stools bloody and slimy. Had resorted to no previous treatment. Took 8 grs. of ext. mones. three times the first day, which checked the discharge, and allayed all unpleasant symptoms.

Case 5th.—A child of four years of age, affected with a bowel complaint which had commenced in the summer, and continued unchecked until November, though treated with a variety of astringents, and subjected to counter-irritation upon the abdomen. The monesia was given in doses of 2 grs. five times daily for six days, with the effect of gradually diminishing the discharges, changing their color and consistence, and creating a vigorous appetite, which the child had not previously enjoyed. Having no more of the remedy I was compelled to relinquish it. Dover's powder and flannel frictions were substituted, and I had the satisfaction of seeing my patient perfectly relieved in another week.

Case 6th.—In this case the remedy entirely failed as in the first case. It was one of diarrhœa supervening upon phthisis pulmonalis, and had been previously treated by creta cum opio., acet. of lead, acet. of morphia, and several of the vegetable astringents without benefit. The monesia was prescribed at first to the amount of 15 grs. and afterwards increased to 40 grs. per day, and persevered in for three weeks—when, as no abatement of the symptoms was perceived, the remedy was discontinued at the request of the patient.

Remarks.—That the above cases may be entitled to their just weight in the evidence now accumulating both for and against this new remedy, it may be well to state, that the few last doses taken by Mrs. K. in the first case, occasioned slight nausea accompanied by a slight burning in the stomach. With this exception, I have not witnessed any of the irritating

effects detailed by St. Ange. My doses, however, were not so large as he prescribed. The above cases lead me to infer that monesia is more astringent than tonic in its operation.—*Am. Med. Intelligencer.*

Kiestein as an evidence of Pregnancy. By H. Letheby, A. L. S.—In No. 11 of the Guy's Hospital Reports, there is a valuable paper upon this subject, by Dr. Bird, in which he enumerates many cases to prove the existence of this principle in the urine of pregnant women. Since the publication of that report I have had many opportunities of investigating the subject; and, as the result will show, it forms an important addition to the already known symptoms of pregnancy. The object of this paper, however, is not only in furtherance of its value as such a test, but to point out certain precautions to be observed in the experiments, in order to prevent fallacy.

The urine should be procured at a time when the woman is as free from disease as possible; and I believe that passed early in the morning, after rest, gives the least variable indications. This should be exposed, in a tall narrow glass to a continuous temperature of about 70° of F.; if a much lower temperature than this is used, say about 40°. I have known the urine stand for more than a fortnight without undergoing any change, although it be replete with kiestein or its principles, at a temperature of 70° However, if the woman be pregnant, we shall observe, in two or three days, the first indication of its presence, by the urine becoming turbid. In a day or two more a thin pellicle forms on its surface, and this gradually acquires consistence up to a fortnight from the onset of the experiment. But long before this time you will have noticed its characteristic odor; certainly not like cheese, to which Dr. Bird compares it, but precisely analogous to the smell of raw beef beginning to putrefy: it is emphatically a *putrid smell.* I have kept the urine more than a month after this, but it never loses either its pellicle or peculiar odor.

Besides the error likely to arise from the adoption of too low a temperature, where the kiestein would not be separated, I would warn the earlier experimenter not to fall into the opposite error of confounding the pellicle which forms upon all urine on standing, especially that which contains the lithates in excess; the more so as the general as well as microscopic appearance of this pellicle is often precisely like that of kiestein. The appearance I am now alluding to, however, is

never accompanied with the putrid animal odor; but, on the contrary, gives out a copious smell of ammonia, and when disturbed falls immediately to the bottom of the liquid. These are the two especial distinctions.

On the value of this test I shall be very brief:—Of the 30 cases examined by Dr. Bird, 27 gave the required indications of the presence of kiestein; the other 3 were at the same time suffering under febrile excitement. Dr. Bird could not detect it in the urine of unimpregnated women, or after parturition, and during suckling

In the American Medical Library, as quoted by the British and Foreign Medical Review for October last, is a report of the experiments of Drs. M'Pherters and Perry, the resident physicians at Philadelphia Hospital. These gentlemen found it in the urine of 24 out of 27 pregnant women. Of the three negative cases, two were not in health when experimented on; further, they could not detect it in the urine of 27 unimpregnated women.

In my own experiments, which have been made at all dates between the second and ninth month of utero-gestation, there was unquestionable evidence of kiestein in 48 out of 50 cases. I am unable to account for its absence in the two exceptions, for I took care at all times to have the urine as free from disorder as possible.

In 17 non-pregnant women there was no indication of its presence. In examining the urine of 10 women during the time of suckling, I found it in all immediately after delivery, but that the evidence of its existence fell off at a period between the second and six months.

A question now naturally arises as to the cause of the presence of this principle, and what is its composition? It appears easily accounted for on the known sympathy that exists between the uterus and the breasts; the latter of which, taking cognizance of the gravid condition of the uterus, prepares itself betimes for the proper performance of that function which by and by is to become its necessary duty. Certain principles analogous to those of milk being imperfectly secreted, may, in this nascent condition, become reabsorbed, because, as Dr. Bird suggests, they do not find a ready outlet, and getting into the blood, are excreted thence by the kidneys; and this habit of reabsorption may go on for some little time after the birth of the child.

The composition of kiestein is not so easily made out: examined by the microscope it consists at first of a multitude of globules, varying in size from the one thirty-two thousandth

to the one eight thousandth of an inch; after a time these break up, or coalesce and form flakes, and then crystals of triple phosphate generally become pretty abundant in it. This shows that the greasy appearance of the pellicle is not due, as Dr. Bird supposes, to the triple phosphate, for this is after formation; nor are these globules composed of fat, for they are perfectly insoluble in ether. I have not been able to detect them in the urine until it becomes turbid, so that they appear to be formed in the urine after expulsion. They are soluble in alkalies and in boiling acetic acid, and give all the reactions characteristic of coagulated albumen or fibrin: to these, then, they are most analogous; but nothing but an ultimate analysis can determine their identity or not. The globules do not differ in appearance from those contained in milk, but their complete insolubility in ether shows that they do differ.—*Am. Med. Intelligencer*, from *Lond. Med. Gaz.*

M. Dubois on the Auscultatory Signs of Pregnancy.—The uterine *souffle* is usually perceptible about the fourteenth or fifteenth week of pregnancy; the period at which it may be first heard, being no doubt dependent upon the amount of development of the uterus and its elevation above the os pubis. The point at which it is most frequently audible is towards the middle of the height of the uterus on its anterior or lateral (generally the left side) part. In this respect M. *Dubois* differs from M. *Naegele*, who states that the common situation of the uterine blowing sound is one of the inguinal regions, extending thence upwards. In most cases, the space over which it may be heard is limited to a circle of two or three inches in circumference. A curious circumstance connected with this sound is the occasional changeableness of its situation; on one day it is inaudible at a spot where it had been distinctly heard the day before, and *vice versa*.

Obstetrical auscultators should be aware of this fact; else they will be apt to be perplexed in some cases. We may mention likewise that the uterine *souffle* varies much at different times in its loudness and distinctness, being one day scarcely audible, and on the next, perhaps, very distinct.

That the development of this sound is somehow dependent upon the circulation of the blood through the uterus, appears from the fact that it is always much enfeebled, or even altogether suspended, by the contractions of the organ during parturition—a fact which abundantly proves that the sound can-

not proceed from the pressure of the gravid uterus on the iliac arteries, as some writers have alleged. The striking resemblance of the uterine *bruit* to that perceived in erectile tumors, and in aneurismal varices, confirms the above opinion. M. *Dubois* objects to the appellation of placentary or utero-placentary being applied to this blowing sound, for the reason that, although its locality most frequently corresponds with the attachment of the placenta, it continues to be audible for some time after the expulsion of this body, and in other cases after the death of the fœtus.

The other sound, that of the fœtal heart, is a still more decisive sign of pregnancy: the number of the pulsations varies, according to the experience of M. *Dubois*, from 135 to 150.* This tictac sound is usually most distinctly perceived on the anterior part of the abdomen somewhat to the left side: it is rarely audible before the completion of four, or four and a half months of pregnancy.—*Medico-Chir. Review, Jan.* 1842, *p.* 197.

Division of the Muscles of the Eye in certain cases of Blindness.—When the central portion of the cornea has become so opaque as to prevent the transmission of the rays of light through the pupil, remaining sound, we may displace the axis of the eye, by dividing one or more of its muscles, so as to induce a certain degree of squinting, and thus bring a transparent part of the cornea in the direct line of vision. Such an operation is much more simple, and greatly less hazardous, than any of the modes which have been proposed to form an artificial pupil.

M. Florent Cunier, a well known ophthalmic surgeon in Belgium, claims the merit of having first performed it.

A man, 25 years of age, presented himself on the 21st of June, at his ophthalmic institution, with a strabismus of the left eye, which had existed from infancy. When two years

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* It is a curious circumstance, that the late Dr. Hamilton, so long the professor of midwifery in the University of Edinburgh, most stoutly maintained that the pulse of the child in utero, and also after birth until breathing commenced, seldom exceeded 60 or 70 pulsations in the minute. In our notice of his last work, in the number of the Medico-Chirurgical Review for July 1836, we questioned the accuracy of the doctor's assertions, and incurred in consequence his wrathful criticism. Our readers may find it worth their while to revert to his pamphlet, and our rejoinder, in the number of this Review for January 1837.—*Rev.*

old, he had suffered from a purulent ophthalmia, which had caused the destruction of this eye, and had left on the cornea of the other a dense opacity, which covered nearly the outer two thirds of its surface; the inner third, which remained transparent, was almost quite concealed in the angle of the orbit, and was visible at those times only when the squint was made to cease. When this was done he could see near objects, by carrying them towards the nose, and then turning the eye as forcibly as possible outwardly. The anterior chamber of the cornea was normal, and the pupil was quite free, and readily contracted on exposure to light.

On the 30th of June I divided, says M. Cunier, the internal rectus muscle; and immediately the pupil occupied the centre of the orbit, and the squint vanished. The eye being, however, not sufficiently drawn outwardly to enable the patient to see objects conveniently, I denuded the sclerotic as far as the attachments of the superior and inferior recti, but without causing the slightest degree of squinting outwards. Founding my practice on the experiments made by myself and Mr. Duffin, I divided the inferior oblique muscle; this was no sooner done, than at once the eye was drawn outwards and somewhat upwards. The ecchymosed blood in the cutaneous wound was rapidly absorbed; but the healing of the conjunctival wound was rather tedious, in consequence of the very considerable retraction of the muco-serous membrane induced by the displacement of the eye-ball. Immediately after the operation, the patient was able to guide himself through my garden; and six days afterwards he came alone to my house.

He now sees so well that he can distinguish the smallest objects, when they are brought near his eye. What is remarkable is, that the pupil has become displaced in such a manner that it is now immediately opposite to the transparent portion of the cornea.

Case 2.—A middle-aged man, who had been blind for 12 years, was my second patient. The left eye was completely wasted; and only a part of the outer half of the right one remained transparent. By compressing the left eye, and turning the right one forcibly inwards, he could perceive the form of large objects. I divided the external rectus muscle, and denuded the sclerotic as far as the insertion of the superior and inferior recti; the eye was immediately drawn inwards so as to cause a squint in that direction, and I was gratified to find that the patient was able to see much more distinctly. Eight days afterwards, he could spread out in the market-place his wicker-baskets, which he made to earn a subsistence.

In the third case, in which the operation for forming an artificial pupil had previously been attempted, but without success, M. Cunier divided the external rectus; and, although the case was certainly a very unfavorable one, considerable improvement of the vision was effected.—*Gazette Medicale.*

Remarks.—This application of ocular myotomy is certainly one of the most ingenious and scientific that has been proposed. The operation for making an artificial pupil being always hazardous, and seldom successful, surgeons will gladly avail themselves of the practice suggested by their Belgian *confrere.—Medico-Chirurg. Rev., Jan.* 1842, *p.* 211.

State of the Urine during Pregnancy and Disease.—M. Donne read a paper to the Academy of Sciences at their meeting of the 31st May last, the object of which was to show that the urine of pregnant women generally furnishes certain characters by which the existence of pregnancy may be ascertained. From a great number of experiments, M. Donné has ascertained that the urine contains much less free acid, phosphate and sulphate of lime, in pregnant than in other women. This circumstance modifies in a very remarkable manner the microscopic crystals of the salts contained in the urine, and enables us to determine with great probability, if not absolute certainty, the existence of pregnancy. M. Donné has applied the method successfully in more than thirty cases, at different periods of utero-gestation.

The author has also examined the properties of the urine in various diseases. In chlorosis the results obtained have been positive and very striking. Healthy urine, as we all know, contains a certain quantity of iron. In chlorosis all trace of the metal disappears; but as soon as we begin to administer the preparations of iron, it is again found in the urine. According to M. Donné, we cannot consider the cure of chlorosis complete, unless the urine contains its regular proportion of iron, some time after we have ceased to administer the remedy. In certain affections which bear some resemblance to chlorosis, but should be distinguished from it, the author found that the urine contained a considerable quantity of iron.

In cases of pulmonary consumption, a very curious fact was noticed; when the urine is evaporated, instead of leaving the ordinary crystals, it gives rise to a thick, viscid matter, analogous to that extracted from diabetic urine. The author asks whether this be saccharine matter, or some animal substance,

and confesses his ignorance on the point; the fact, however is worthy of attention, especially since the observations of M. Rayer have established some analogy between diabetes and pulmonary consumption, by proving that the latter generally ensues on the apparent cure of the former. However, this appearance of the urine is so constant and remarkable that it will often enable us to diagnosticate the existence of phthisis, even without seeing the patient.

The microscopic crystals of the urine in cases of typhoid fever, are, in like manner, very peculiar. It is difficult to describe them in words, but they bear some resemblance to those obtained from the phosphate of ammonia. This kind of crystals is never seen in a state of health; while, on the other hand, the author has never seen them absent in typhoid fever, during many years that he has turned his attention to this subject. Typhoid fever, however, is not the only disease in which they exist; similar crystals are found in cases of pneumonia and acute rheumatism.—*Provincial Med. and Surg. Journal*, June 19, 1841.

Lapis Divinus in Otorrhœa. By Mr. Curtis, Surgeon at the London Royal Infirmary for Diseases of the Ear.—When visiting the hospitals of Prague, I found the lapis divinus in very general use in the treatment of otorrhœa, and I afterwards found it employed in a similar manner at Vienna, Munich, Berlin, Leipsic, and Hamburgh. At Prague I procured some of the lapis divinus, and the formula for its preparation; the latter is as follows:—Take sulphate of copper, nitrate of potass, and alum, of each sixteen parts—powder them separately, and then mix them well together; fuse them in a glass vessel in a sand bath, and add one part of powdered camphor; break the mass in pieces when cold. This formula is varied in different pharmacopœias, there not being quite so much of the principal ingredient, the sulphate of copper, in some, while others substitute the acetate for it; for my part I prefer the sulphate. On my return to this country I determined to give it a trial, and have experienced much advantage from its use, as the following cases will testify. I should state, however, that the preparation I employ consists of two drachms of the lapis divinus dissolved in an ounce of distilled water, a drachm of this solution being added to six ounces of rose or distilled water; this latter constituting the injection I recommend, and which I direct to be thrown into the meatus twice a day. I begin with a weak solution, in-

creasing the strength as I find it can be borne by the patient. Thus used, it does not cause any pain; it acts as a mild stimulant and astringent, and gradually produces a cessation of the discharge.

Case 1.—Mr. M., of Dublin, aged 50, has had a discharge from the left ear for sixteen years, attended with deafness, consequent on fever; on examination with Gruber's speculum and lamp, an ulcer was detected on the membrane of the tympanum, which membrane was perforated by it. The treatment just described was adopted; he came to me for about a month, during which time he improved materially; he afterwards pursued the same plan under my directions; the ulcer healed up, the discharge ceased, and a cure was effected, his hearing being at the same time restored.

Case 2.—Mrs. F., the widow of a clergyman, deaf seven years with the left ear, attended with a profuse, offensive discharge, tinged with blood, which she attributed to her having caught cold in her confinement. It was a singular and interesting fact in this case, that the discharge seemed to alternate or be vicarious with the catamenia, diminishing when they were present, increasing on their cessation. Inspection by Gruber's lamp and speculum showed on the membranum tympani a large ulcer with rough edges, and inclined to bleed. The edges were touched with a strong solution of the lapis divinus by means of a bougie passed into the ear, the meatus being protected by the shield of the speculum, which had been previously applied with that view. Under this treatment the ulcer improved, and a cure was gradually effected by means of a weak injection. The progress of the case was somewhat retarded by erysipelatous attacks affecting the auricle: an alterative plan of treatment was adopted in this case.

Case 3.—John Poverell, aged 15, a dispensary patient, has labored under a very offensive discharge from the ear, tinged with blood, and attended with partial deafness for three years the sequelæ of scarlet fever. The membrane of the tympanum was sound. The injection was used for three weeks, at the end of which time he was cured of the discharge, and had regained his hearing.

Case 4.—Mary Lowers, aged 37, a dispensary patient, has been quite deaf for ten years with otorrhœa and polypus, resulting from a cold, according to her account. The polypus was removed with the aid of the forceps, and the neck touch-

ed with a strong solution of lapis divinus, the meatus being protected by the shield of the speculum. Under this treatment, jointly with the use of the injection, the part healed, the discharge ceased, and the hearing was restored.

On Dislocation of the Crystalline Lens. By JOHN WALKER, Esq., Surgeon, Manchester, England.—A severe blow, or other injury inflicted on the eye, will sometimes cause a displacement of the lens. This may occur in three different directions; the lens may be thrown backwards into the substance of the vitreous humor, forwards into the anterior chamber, and sometimes forced through the sclerotic coat, when it will be found lying between it and the conjunctiva. Instances of each of these forms of displacement are not unfrequently met with. The lens may also be more partially displaced, either upwards, downwards, or laterally. Dislocation of the lens, however, is not always the result of injury. I have seen cases in which the crystalline had been protruded into the anterior chamber when no accident had occurred, and where the change had been, to all appearance, spontaneous. In one case, a young girl, under the care of my colleague, Mr. Windsor, both eyes were thus affected; the lens was seen lying in the anterior chamber, its transparency but little diminished, of a bright, gold-colored tinge, and very much resembling a lump of clear, almost colorless, jelly. In this instance, the pupils were dilated and immovable, considerable inflammation existed, and the usual concomitants, intolerance of light, pain in the organ, and impaired vision, symptoms which were apparently referable to the irritation caused by the displaced lens. The lenses were extracted, but the mischief engendered had been of too serious a character to be remedied, and the eyes remained perfectly amaurotic. Other instances of spontaneous dislocation are recorded; in some of these, the lens passed either in front or behind the pupil, according to the position of the head, and did not appear to excite much irritation.

It seems most probable that spontaneous dislocation of the lens can only result from a previous thinning or absorption of the capsule, although some of our best writers appear to think that when the lens retains its transparency the capsules remain entire, otherwise they presume that it would become opake, and be absorbed when in contact with the aqueous humor. This, however, does not seem a necessary result, ex-

cept the texture of the lens were also broken up, which, in cases of spontaneous dislocation, we should not expect it to be.

When the lens is protruded either into the anterior chamber or between the sclerotica and conjunctiva, it will usually be proper to remove it from its new position as early as possible, as it will otherwise be sure to excite inflammation, which may lead to a serious impairment of vision. Indeed, the injury which is sufficient to cause displacement of the lens will very often be productive of other important consequences, as concussion of the retina and severe inflammation of the globe. For the removal of a displaced lens from the anterior chamber, a small incision will alone be requisite; the opening need not extend to more than one-fourth of the circumference of the cornea, when, if it do not readily escape, the introduction of an iris-hook will effect its dislodgement. In one case of dislocation into the anterior chamber, the lens, after extraction, was found completely ossified; it had been several years in its unnatural position, and had either produced or was attended by amaurosis.

If the lens had been forced through the sclerotica, and remain under the conjunctiva, a small incision into the latter tunic will be sufficient for its removal. In one instance which came under my notice, and which was occasioned by a blow, the wound of the sclerotica, through which the lens had been protruded, was scarcely perceptible, the displaced body was easily removed, and was found quite softened and slightly opake; the nature of the case was indicated by the injury, and by the size, shape, and consistence of the foreign body under the conjunctiva, and confirmed on its removal.

If the lens be displaced into the posterior chamber, it had probably better not be interfered with, except it be opake, and its removal seem likely to cause a restoration of vision; but even then, it would be advisable merely to depress it, because the vitreous humor would most likely be disorganized.

It is worthy of remark, that the extraction of a displaced lens from the anterior chamber gave rise to the systematic extraction of cataract by incision of the cornea. Daviel, a French surgeon, took the hint from Petit, who, in 1708, punctured the cornea for the evacuation of a displaced and opake lens.—*N. Y. Lancet.*

Memoir of a Gentleman born blind and successfully operated on in the 18th year of his age. By Dr. Franz.—At the birth of this young gentleman (the son of a physician) the

eyes were found to present a twofold defect of organization. Both eyes were turned inwards to a great extent—and cataract existed in both. Towards the end of the second year, keratonyxis was performed on the *right* eye, which was followed by iritis and wasting of the eye-ball. Within the next four years, two similar operations were performed on the *left* eye, without any success, but with no destruction of the eye. The color of the opacity, at length, became of a clearer white and some faint perception of a strong light was experienced by the boy.

Into the long and minute description of the state of this gentleman's eyes in his 18th year (1840) we cannot go. It appeared that the *right* eye was completely amaurotic, and the *left*, which had become atrophied, was the only one considered fit for an operation. The following were the steps taken.

"On the 10th of July 1840, in the presence of Dr. Swaine and with the kind assistance of Messrs. F. Fowke and F. Steinhaeuser, I made an incision in the cornea upwards, and introducing a pair of fine curved forceps, armed with teeth, into the posterior chamber, I seized the anterior wall of the capsule by passing one of the blades of the forceps into its small aperture, and attempted, by pulling it slowly, to separate it from its adhesion with the uvea and its peripheral connection, in which I succeeded without producing a prolapsus of the vitreous body, or tearing the capsule, which I now removed. After this proceeding, a large piece of the lens of an opaque color, probably the nucleus, presented itself in the pupil, which was easily removed from the eye by means of Daviel's spoon; the pupillary aperture then appeared perfectly clear and black. The patient was now turned with his back to the light, for the purpose of trying a few experiments as to his sight, but from these I was obliged to desist on account of the pain which the light produced in the organ. Both eyes were then closed with narrow strips of court-plaster, and the patient carried to bed. Venesection, local bleeding, fomentations of iced water, continued without intermission for about forty-eight hours, together with the scrupulous observance of the most severe regimen, barely succeeded in keeping down the inflammation, the effects of which in this case, where but one eye offered hope, were much to be dreaded, if it should surpass that degree which was necessary for the healing of the wound in the cornea. This process went on and terminated so favorably, that the cicatrix, situated close to the sclerotica, is now scarcely visible. The patient suffered from muscæ volitantes and from a considerable intolerance of

light, pain being produced by even a mild degree of light falling on the closed lids. The muscæ volitantes were greatly mitigated, and the intolerance of light ceased after the lapse of a few weeks, by the use of proper pharmaceutical remedies, by local bleeding, change of air, &c., and the employment of the ophthalmic fountain of Professor Jungken, which I have fully described in the Medical Gazette, vol. xxvii, p. 444. To promote the development of the power of vision, the use of the fountain was continued twice daily, with Pyrmont water, and latterly with simple spring-water, for the space of three months, when it was discontinued, as it began to irritate the eye."

On opening the eye on the third day, he perceived a blaze of light, and all objects confused and in motion. He could not distinguish any object. The pain forced him quickly to close the eye. Gradual exposure of the eye to light habituated the organ to its stimulus; and when the vision became tolerably distinct, all objects appeared so near to him that he was afraid of coming in contact with them, so that he was constantly correcting the sense of sight by that of touch.

On the 21st of September, 1840, Dr. F. operated on both eyes for the congenital strabismus. The operation was so successful, that the gentleman's personal appearance was much improved. In November he was able to read the names over the shop windows, and to tell the time, to a minute, by the St. Paul's clock. The tide of human existence, however, in the streets, so confused and confounded him, that at last he could see nothing. By the spring of 1841, the sight was much improved—and improving. The case, altogether, is very creditable to Dr. Franz, as well as interesting to the profession and the public. The paper is published in the Philosophical Transactions for 1841, Part 1.—*Med. Chir. Rev.*

On the Injuries to Health occasioned by breathing Impure Air in close apartments.—The *Lancet* for June 19th, 1841, contains some remarks on this subject by Dr. Elmore, which we conceive to be of so much importance, that we shall transfer the greater part of them to our pages, and invite to them special attention. The entire neglect, for the most part, of all means for ventilation in our buildings, public as well as private, and the imperfect means adopted for the purpose in the few instances in which it has attracted some little consideration, is truly remarkable when it is considered that a constant

and duly regulated supply of atmospheric air is essential to the sustention and prolongation of life, and to mental enjoyment. Formerly our dwellings in Philadelphia were warmed (if so it might be called) by wood fires, the greater part of the heat from which was carried up the huge chimneys, and the currents of air thus necessarily created, were supplied by the crevices in the doors and windows. The consequence was, a general and just complaint by those who collected in front of the fire that their backs and feet were freezing whilst their faces were burning.

At present warming houses by means of heated air is becoming prevalent, and whilst ingenuity has been taxed for the means of effecting this with most economy, i. e. of heating the air to the highest temperature, the *quality* of this air and the means by which it is to pass off when rendered more impure than when received, seems not to have obtained a thought. The air is heated by *iron* stoves in chambers of masonry. These chambers are too small, and the air is conveyed through the building by flues also too small. Hence it is necessary in cold weather that the stove should be kept red hot in order to heat the air sufficiently to warm the house, and thus the air is rendered almost unfit for respiration when introduced in the rooms. No means being provided by which this air shall regularly pass off, it becomes confined, and much discomfort and many ill effects result from breathing this air, constantly becoming more and more impure. But Dr. Elmore has discussed this so fully, that we shall not dilate further on the subject, but content ourselves with quoting his observations.

A free admission of air, and a constant supply and free circulation of this element, "is as necessary for sustaining life as a given quantity for the combustion of the fuel we require to warm our apartments: our builders, nevertheless, only provide for the latter, as if the former, although the more important, was of minor consideration; or, that they conceived the chimney-draught sufficient for both purposes, when in reality it does not answer that for which it is principally intended; as by far the greater portion of the heat generated in our open fire-places is carried up the chimney, by sharp currents of air from occasional openings of doors, or such crevices as it may force its way through; being, moreover, frequently productive of serious bodily injuries, particularly to those of delicate frames; while it cannot be sufficient for the purposes of wholesome ventilation: this air being colder than that already in the room, is consequently of greater specific gravity, and must form a lower stratum, not unfrequently felt by those placed round the fire,

suffering from an undue proportion of heat at one side and of cold at the other.

"It should also be borne in mind that the openings of our fire-places being seldom more than three or four feet from the floor, the upper stratum of air which we breathe is neither removed nor purified by this under-current, and must, from being breathed over and over again, be productive of most prejudicial effects, and that the contamination of this atmosphere is considerably augmented at night by the combustion of lights. It has been ascertained that the quantity of air breathed by an ordinary-sized person is about two thousand cubic feet per hour; and that two mould candles consume as much of the oxygen of this air as a human being; and that the nitrogen and carbonic acid gas which remain are peculiarly inimical to animal life, and that when carried up by the currents occasioned by combustion and respiration, they form an upper stratum where they remain, and must be repeatedly inspired before they make their escape into the chimney, the only ventilating flue with which our houses are provided.

"It should also be observed, that the heat thus generated is in proportion to the quantity of oxygen abstracted from the atmosphere, which enters into combination with the carburetted hydrogen of the flame of candles, coal-gas, oil, or other inflammable matter, from which light is produced. That every cubic foot of carburetted hydrogen consumed, unites, on an average, with two cubic feet of oxygen, (that portion of the atmosphere required to support animal life,) and that the product of this combustion is about two and a half inches of water and one of carbonic acid gas, which, when inhaled in its pure state, proves instantly fatal; and the greater the proportion we inhale, in addition to the vapors evolved from the lungs and skin, the more pernicious the effect.

"Supposing, for example, that the perfect lighting of an ordinary-sized apartment requires fifteen cubic feet of carburetted hydrogen per hour, this would form about a pint and a half of water, and fifteen cubic feet of carbonic acid gas; for whenever carburetted hydrogen gas is burned with oxygen, or atmospheric air, these are the products of the combustion, whether the carburetted hydrogen is obtained from wax, tallow, oil, or coal. If, therefore, this lighting continues in an unventilated apartment for seven hours, one gallon of water is produced, the greater part of which will be deposited on the walls, windows, furniture, polished metal, or other cold surfaces, with which it comes in contact: and to some articles of this nature it is known to prove highly prejudicial, in addition to the in

jury to health occasioned by an increased quantity of moisture, mixed with the air we breathe. As one of the principal functions performed by this air for the preservation of health, is to carry off with it a considerable quantity of vapor, in order to prevent its undue accumulation in the lungs, it is, therefore, evident, that after it has been already so loaded it cannot properly perform these functions, and that consumption and other complaints are thus frequently induced.

"The prejudicial effects of carbonic acid gas (which is the same as the choke-damp of mines) as well as the nitrogen of the air, which is set free by the abstraction of the oxygen (and amounts in quantity to four times that of the oxygen), are well known, and ought by all possible means to be provided against. This has been attended to within the last few years in our public hospitals, and the mortality in consequence considerably decreased; and likewise in several of our manufactories and public establishments, where the diseases generated by the number of persons congregated in such establishments have been proportionably diminished. In the House of Commons, also, where hundreds of members, with hundreds of candles burning at night, tended so much to vitiate the atmosphere, important improvements in lighting, as well as ventilation, have been recently made; but in our domestic establishments little or no attention has been paid to this important subject, and the foundation of a variety of diseases must be the result, particularly from the foul air breathed at balls, or other crowded assemblies.

"The confinement of air in our churches and places of public worship must also be highly prejudicial, as we are frequently exposed to an atmosphere, on entering one of these edifices in the summer months, ten or fifteen degrees below that of the external air, independent of the stagnant state in which it has been allowed to remain during a whole week, often vitiated, in a greater degree, by the gaseous matter evolved from human remains; and even in private houses much inconvenience is experienced from the stagnant state of the atmosphere in close and gloomy weather, as the entire basis of ventilation depends on the possibility of producing a constant circulation as well as supply of this element. Close stoves are also objectionable, when made of iron, and heated to a certain temperature, as oxide of iron is produced by the powerful attraction of that metal for oxygen, and the formation of ammoniacal gas by the mixture of the nitrogen which remains, with hydrogen, acting on our bodies and olfactory nerves.

"But if stoves were constructed of masonry throughout, as in many other countries, or of fire-tiles, or porcelain plates, imbedded in mortar, with well-regulated flues, they would be far preferable to open fire-places; this substitution of imperfect conductors of heat being not only consistent with the soundest principles of economy in the preservation of heat, and its more uniform distribution through apartments, but more conducive to health than bringing the air in contact with iron stoves or pipes. Our desire, however, for polished metals in almost every department of our domestic appendages, united to the interests of the furnishing ironmongers, to whom these matters are usually left, must operate, in no small degree, in determining the prevailing taste for this commodity. Porcelain stoves may, nevertheless, be made sufficiently ornamental for those who prefer health to fashion; and when apartments are provided with well-regulated apertures and flues through their ceilings into the adjoining chimneys, to carry off the air vitiated by respiration and combustion, a sufficient degree of heat may be obtained with a sufficient supply of that element, without which it is impossible to maintain health.

"The healthy appearance of those who pass the greater part of their time in the open air, sufficiently indicate its advantages. Armies are also well known to have greater numbers on the sick list when well-housed, and what is considered comfortably settled in quarters, than when exposed in a campaign to the vicissitudes of the seasons for weeks and months, without any other covering than the canopy of heaven, or occasionally of a tent or hut, or the shade of a tree. These facts ought to satisfy us that we should admit the air as freely as possible, and provide, at the same time, for its escape through the ceilings of our apartments at all seasons of the year, as the temporary and often imaginary inconvenience of a little cold, when compared with the decided disadvantages of breathing impure air, is by far the lesser evil."—*Am. Jour. Med. Sci.*

Cases of Dislocation of the Clavicle backwards behind the Sternum. By M. Morel.—Case I. Lemoine, 17 years of age, was overtaken in a narrow street by a carriage, and had his right shoulder violently squeezed against the wall, in a direction forwards and inwards. He experienced at the time some pain at the bottom of the neck, and a great sensation of suffocation which lasted more than a quarter of an hour. The dyspnœa gradually subsided, but the motion of the right arm

not returning, he, on the 8th day after the accident, entered the *Charité*, when he was found in the following state:—The two shoulders were on the same level, but the right one was nearer the mesial line. The internal extremity of the clavicle was half concealed behind the sternum, and its upper part consequently formed a projection above the bone. When the shoulder was carried backwards the tumor became more prominent forwards. On depressing the shoulder, it rose, and disengaged itself from behind the sternum, and, by carrying the shoulder upwards, outwards, and backwards, the bone returned to its natural position; the hand could be carried to the head, by directing the elbow backwards, but if it was brought forwards, the attempt caused great pain. Desault's bandage was applied; but, as it slipped, it was replaced by that of Velpeau, which kept the bone completely in position. The patient was lost sight of on the 18th day, as he was obliged to be removed to another ward on account of the appearance of smallpox.

Case II.—Lamotte, 28 years of age, was shoeing a horse, when the animal made violent efforts to free his leg; endeavoring to restrain them, he fell, and met with a dislocation of his clavicle backwards. The next day he was in the following state:—The right shoulder was nearer by sixteen lines, than usual, to the mesial line; there was slight swelling of the external jugular vein; some pain was felt, but more towards the middle than the extremity of the clavicle, the external head of which had disappeared behind the sternum, where it was impossible to feel it. When the hand was carried to the head, there was pain if the elbow was moved forwards, but none if it was directed backwards. Two attempts at reduction made, the one by carrying the shoulder outwards and backwards, the other by acting on the arm in the same direction, were unsuccessful.

M. Lenoir made the patient be seated on a low chair; he then placed a sheet round his body, and fastened it to an iron bar. Two assistants pulled the arm and shoulder outwards and backwards, (almost horizontally in fact,) while another kept the wrist lowered, and at the same time turned towards the left side. M. Lenoir then placed his knee between the shoulders, and with one hand pulled the right one backwards, while with the other he traced the clavicle. Reduction was accomplished, and the bone was retained in its place by the shoulders being kept back by a bandage applied in the form of the figure 8. Another bandage was placed round the body, and kept the elbow close to the side. On the twelfth day this was removed and a sling had recourse to. On the eighteenth day he was

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doing well. The reduction was so complete, that the extremity of the dislocated clavicle was more prominent than that of the other.

The first case put on record of this kind of dislocation, caused by violence, was published by M. Pellieux in 1834, in the Revue Médicale. Since then two other cases have been reported in the Gazette Médicale for 1836–37. Besides the two that we have given above, a third is quoted by the Gazette Médicale, from M. Morel's pamphlet; but we have not given it, as it appears to us not to be a case of dislocation backwards. In Sir A. Cooper's Lectures on Surgery, a case is mentioned, which was produced by deformity of the spine. The scapula was pushed forward, so that sufficient room was not left for the clavicle between that bone and the sternum, and its internal head gradually slipped behind the latter, pressing upon the œsophagus, and giving rise to great difficulty of swallowing. In this case, as reduction was impossible, the clavicle was sawn through, about an inch from the sternum, and dissected out. The operation was done by Mr. Davis, late of Bungay, in Suffolk. From the cases published, M. Morel says, that there are two kinds of this dislocation, viz. backwards and downwards, and backwards and upwards, as when a part of the inner head of the clavicle is above the level of the sternum. We can suppose that the latter species is consecutive, and produced by the action of the sterno-mastoid muscle, and by the weight of the superior extremity. The dislocation downwards is much more difficult than the other to reduce, and when reduction is effected, the bones are not so easily retained in their place.—*L. and E. Monthly Jour. Med. Sci.*, from *Gazette Médicale*, 21st Aug. 1841.

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EDITORIAL NOTICE.

Dr. Drake will spend the ensuing vacation in Cincinnati, and Dr. Yandell, at Murfreesboro', Tennessee. Correspondents of the Journal who reside near those places may direct their communications to either of those gentlemen: all others will please forward them to Dr. Colescott, Louisville.

MEDICAL CONVENTION OF OHIO.

We remind our readers in Ohio that the fifth annual meeting of this convention will be held, on the 16th of May, in the city of Cincinnati. We trust it will be well attended.

We thank our friend Dr. Dawson for a copy of the proceedings of the last Convention, lately received, and of which a notice will appear in our next number.

SCHOOL FOR THE BLIND IN LOUISVILLE.—PETTY MISREPRESENTATIONS.

In the *Boston Medical and Surgical Journal* for March the 2d, is the following paragraph from an anonymous Louisville letter, dated February 8th:

"We are just having a visit from Dr. Samuel G. Howe, the eminent superintendent of your Institution for the Blind. He is on a mission of benevolence, to establish a similar institution here. With four blind pupils he visited our Legislature at Frankfort, and there exhibited these redeemed children before the powers that be. The exhibition was satisfactory; the argument was convincing; and the General Assembly, with hardly a dissenting voice, voted to establish a school for the blind in Louisville, and granted ten thousand dollars to endow it, provided that this city would first raise the means to put it into operation. This would cost only about a thousand dollars, upon the plan proposed. We wanted no more of the State government. We can do the rest ourselves, and measures are now in train to obtain the preliminary funds here. Dr. Howe has exhibited these pupils here for several successive evenings, and demonstrated here, as well as at Frankfort, the practicability of educating the blind for usefulness and enjoyment. This matter is entirely new with us, and has excited great interest and drawn multitudes to the exhibitions; and without doubt, owing entirely to the benevolent energy of Dr. H., we shall soon have a small school in successful operation. It will be but a nucleus at first, to gather more funds and pupils. But we trust it will grow, so as to gather all the blind of the State within its folds."

Misstatements concerning the origin of public institutions should not be allowed to pass without correction. Under this sentiment we have extracted the foregoing, which displays, in a small way, more of systematic injustice than any corresponding number of lines which have lately fallen under our notice. In the beginning the writer endeavors to make the impression, that the "four blind pupils" were from Dr. Howe's school, when but *one* came with him from Boston, and the other three belong to the *Ohio Institution for the Blind*, where they have been exclusively taught (two of them being natives of that State), and whence they were sent by the Trustees of that school, in the care of its respected and enterprizing superintendent, Mr. Chapin, whose name is not mentioned. That gentleman, however, conducted two of the most interesting exhibitions made in Frankfort and Louisville, Dr. Howe not being present, at least in the latter. Again, the writer says "this matter is entirely new to us;" but what are the facts? They are these. In the winter preceding, 1840–41, a professor of the Medical Institute delivered once a week, in the Hall, a course of popular lectures on Physiology, and when he came to the sense of vision, devoted an evening to the method of instructing the blind. With the aid of Mr. Patton, a former pupil of the New England school, but at the time a resident of Louisville, the lecturer

made an exhibition of the mode of teaching the blind, in reading, writing, arithmetic and geography, and concluded with an urgent appeal to the audience, one of the most numerous and intelligent ever assembled in the city, in favor of the establishment, in this city, of an institution for their instruction in letters and the mechanic arts. When the lecture closed, W. F. Bullock Esq., a member of the Legislature, came forward and declared that he would agitate the subject in the General Assembly as soon as the session should open; and before his departure he called on the lecturer and got a variety of reports and documents, by the aid of which he framed a bill, and sustained it by an able and eloquent speech. Without difficulty it passed the house of which he was a member, but was laid over in the other. At the opening of the next, the last session, this bill was called up. Meanwhile a friend of Dr. Howe in this city had written to him, and requested him to visit Kentucky, which he benevolently did, and on his way out, asked from the Ohio school the aid which was so promptly granted. So much for the assertion "that this matter is entirely new with us."

Dr. Howe's benevolent labors for the blind have not been so few and feeble, that his friends need claim for him what belongs to others; nor have they been so extraordinary as to justify an exclusive mention of his name, to the careful suppression of the names of those with whom he may happen to be associated.

DISEASE OF THE TONGUE AND MOUTH.

Dr. James C. Harris, of Jefferson, Cherokee county, Alabama, in a letter to one of the Editors, dated January 19th, 1842, relates a very interesting case of disease of the tongue and mouth. He gives the following history of the patient:

"During the spring of 1836, Col. John Lowry, aged 64, a lawyer by profession, and then a resident of Talladiga, Alabama, had a most violent attack of bilious fever. In the course of the treatment, it was thought necessary by the physicians in attendance to administer calomel in large quantities; he accordingly took 50 or 60 grains at a dose, on several different days. Profuse salivation ensued, and recovery was slow. After this, he enjoyed a tolerable degree of health until the summer of 1840, when he was seized with an inflamed and ulcerated tongue, sore and swollen gums and lips, and a profuse flow of saliva. The fetor of the breath and other attendant symptoms resembled the effects of mercury so much, that the patient believed his

former ptyalism had returned, and so expressed himself, although he had not taken a particle of mercury, in any form whatever, since his attack of fever in 1836. Being then in the midst of a heated political contest, but little if any thing was done in the way of treatment until August. At that time, in addition to the affection of the mouth and fauces, Col. L. presented the following symptoms: skin sallow, particularly that of the face; pulse slightly accelerated; centre and base of the tongue covered with white fur; nausea, and slight derangement of the bowels, most generally of a dysenteric character, but occasionally the reverse. I supposed the condition of the tongue and mouth to depend upon a depraved state of the liver and chylopoietic organs, and accordingly prescribed a mercurial cathartic, which acted well, but excited an unusual and almost intolerable degree of nausea, that did not subside for several days. It was then repeated with nearly the same consequences, the nausea being if any thing augmented; the flow of saliva was also increased, and the intumescence of the tongue and adjacent glands was observed to be greater. Sulphur was now given in tea-spoonful doses, and a detergent wash applied to the mouth and throat. The local inflammation subsided to its former condition, at which it remained stationary for several months, when it gradually became worse, and again excited serious attention. The derangement of the bowels continued during all this period, having undergone no amelioration from the remedies employed.

I now directed a pill, containing two grains of calomel and one-fourth grain of opium, to be taken every night at bed-time. The first pill had the effect of lessening the number of alvine discharges; after the second, the bowels were still further improved, but the condition of the mouth was thought to be aggravated. Nevertheless a third was administered, which was followed by complete mercurialization. Recourse was again had to the sulphur and the detergent gargle previously mentioned, but with no better success than in the first instance, the condition of the mouth remaining much the same. Col. L.'s health was now so much impaired by the constant discharge of saliva, the nausea and loss of appetite, and the accompanying diarrhœa, as to prevent him almost entirely from attending to business. Subsequently, the intestinal derangement and the general health were somewhat improved by the use of the tinct. ferri muriat., but in other respects he remained the same. For the last few weeks the patient has been using the elixir vitriol, with decoction of sarsaparilla *ad libitum*, but without any apparent benefit."

Dr. Harris asks, in conclusion, if it is possible that his patient is laboring under ptyalism from mercury *taken four years previously?* if not, what form of disease must it be considered, and on what does it depend?